Nutrition Response Toolkit for Humanitarian Crises

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Tufts Initiative for the Forecasting and Modeling of Infectious Diseases

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Executive Summary

The Nutrition Response Toolkit for Humanitarian Crises is designed to provide standardized, low-cost, easily adaptable crisis nutrition operational protocols for implementation in future field hospital deployments. In many humanitarian crises, field hospitals lack sufficient medical supplies and personnel to properly prepare, provide, and sustain food services and clinical nutrition assessments. Furthermore, nutrition personnel may lack the training or guidance on how to coordinate food services or conduct rapid clinical nutrition assessments. These challenges necessitate the creation of a standardized nutrition emergency response toolkit that can provide Registered Dietitians (RDs) and other nutrition personnel with:

1. Staffing models and training recommendations for field environments;
2. Record-keeping systems to monitor nutrition status, allergies, and dietary needs;
3. Food delivery trackers and meal forecasting calculators;
4. Therapeutic meals and menu options with limited food supplies; and
5. Easily administered malnutrition screening assessments.

This toolkit is designed to be adaptable to a variety of emergency settings with or without an operational electronic medical record (EMR) system. That said, this toolkit is intended to expand over time to incorporate new protocol templates based on experiences faced by other nutrition personnel in emergency settings. As such, these tools should be considered templates that can be adapted for the nutrition personnel's or clinician's needs to best reconcile medical and nutrition records, harmonize patient information, and improve the continuity of care between medical and nutrition branches. We encourage those using this resource to collaborate with authors to expand this toolkit and help to improve this resource as preparedness planning tool for crisis nutrition personnel in future field hospital or humanitarian crisis settings.

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Glossary

Term	Operational Definition
Combat Support Hospitals & Field Hospitals	Mobile, deployable hospitals housed in tents and expandable containers that provide surgical and trauma close to combat action
Malnutrition	An acute, subacute or chronic state of nutrition in which a combination of varying degrees of overnutrition or undernutrition with or without inflammatory activity have led to a change in body composition and diminished function [1,2].
Medical Nutrition Therapy	"An evidenced-based application of the Nutrition Care Process that includes a nutrition assessment/reassessment, nutrition diagnosis, nutrition intervention and nutrition monitoring and evaluation that typically results in the prevention, delay or management of diseases and/or conditions [3]."
Nutrition Support	The provision of enteral or parenteral nutrients to treat or prevent malnutrition. Nutrition Support Therapy is part of Nutrition Therapy, which is a component of medical treatment that can include oral, enteral, and parenteral nutrition to maintain or restore optimal nutrition status and health [4].
Enteral Nutrition	Enteral nutrition is another way people can receive the nutrition they need. Also called "tube feeding," enteral nutrition is a mixture of all the needed nutrients. It is thicker than parenteral nutrition and sometimes it looks like a milk shake. It is given through a tube into the stomach or small intestine [4].

Introduction

During the novel coronavirus disease 19 (COVID-19) pandemic, countries worldwide have developed temporary medical facilities to provide sufficient testing and care to infected persons [5–9]. An extension of combat support hospitals and field hospitals, these facilities commonly provide emergency medical services during military deployment [10,11]. However, in recent years many countries have begun deploying these temporary hospitals to provide emergency services and supplies during natural disasters and humanitarian emergencies [12,13].

Throughout the COVID-19 pandemic, these facilities have faced growing volumes of infected persons and have lacked sufficient personnel, medical supplies, medical equipment, and bed capacity to effectively house and treat patients. Safety concerns for medical personnel have also inhibited the delivery of care by reducing patient interaction, wearing personal protective equipment, and performing medical assessments while practicing social distancing [14]. These challenges especially inhibit medical staff providing nutrition services where patient interaction is consistently needed to monitor nutrition status and deliver therapeutic meals multiple times per day during a patient's hospital stay [14]. Furthermore, these nutrition operations require careful coordination and management of food contracts and supplies, which must be consistently monitored to ensure accessibility of patient meals and continuity of food safety, respectively.

In review of the Accreditation Council for Education in Nutrition and Dietetics' *Accreditation Standards for Nutrition and Dietetics Internship Programs*, under 'Domain 4. Practice Management and Use of Resources: Strategic application of principles of management and systems in the provision of services to individuals and organizations,' training competencies lack mention of food contracts or the development of skills necessary to implement and sustain food contracts, which are becoming vital skills in response to COVID-19 [15]. Furthermore, these resources fail to provide sufficient training on managing food contracts, staffing nutrition personnel, recording patient nutrition status, or administering nutrition assessments in emergency or disaster relief efforts. Without these resources, nutrition personnel cannot sufficiently prepare for field hospital deployments and must modify existing nutrition assessments that are not designed for resource sparse settings. These challenges necessitate a central technical report created to inform nutrition protocols and assessments in emergency response settings for clinical nutritionists, dietitians, and personnel.

To promote preparedness plans for nutrition response in future humanitarian crises, we develop this Nutrition Response Toolkit for Humanitarian Crises to provide a standardize nutrition-focused protocols for implementation in future field hospital deployments or humanitarian emergency facilities. For each proposed tool, we explain that tool's purpose and utilization, provide an example of how to implement this tool in the field, and provide a fillable form for use in crisis settings.

2. Establishing a Field Hospital Nutrition Operations Team

2.1. Overview

      When planning for a potential use of a field hospital, one must remember that field hospitals are modular medical treatment facilities generally designed to provide medical capabilities in a deployed setting [11]. Within the field hospital, it is the responsibility of nutrition care operations, which primarily consists of Registered Dietitians (RDs) and Nutrition Dietetics Technicians, Registered (NDTR), to provide services that include meal preparation and service to patients, medial nutrition therapy, dietetic planning and patient education [16]. Hospital food service and clinical nutrition operations are essential to ensure patients receive sufficient nutrition to prevent complications associated with malnutrition, while complying with the appropriate diet orders given their medical diagnosis [16]. Yet in the wake of a humanitarian crisis, no single staffing model exits for nutrition response in field hospitals [17]. With that in mind, we provide examples of a staffing model and personnel training program that can assist in establishing nutrition services within an emergency field hospital or medical facility.

2.2. Staffing model for emergency settings

<u>Purpose</u>
The Field Hospital Staffing Model is designed to identify staffing needs for nutrition services in a field hospital or emergency facility setting with 125-500 patient beds. This model accommodates for extended time needed to complete patient assessments due to the absence of an EMR, donning and doffing full PPE, locating patients amid transfers, coordinating care with medical and nutritional personnel, documenting MNT recommendations, and balancing the completion of clinical and food service roles.

<u>Utilization</u>
This tool should be referenced during the planning phase of a field hospital mobilization. This model assumes that: i) nutrition operations are functional during a 12-hour period, e.g., 6:30 am – 6:30 pm, seven days per week; ii) the field hospital serves a patient census ranging from 125-500 patients per day; and iii) RDs have limited capacity (3-4 patients daily) to provide clinical care.

<u>Example of Staffing Model</u>

Position	Shift	Working Hours	FTE (~125 beds)	FTE (~250 beds)	FTE (~375 beds)	FTE (~500 beds)
Food Service Dietitian *	AM	6:30 am – 2:30 pm	1	1	2	2
Food Service Dietitian *	PM	11 am – 7 pm	1	1	1	1
Clinical Floor Dietitian**	Day	8 am – 4 pm	0	1	2	5
Clinical Critical Care Dietitian***	Day	8 am – 4 pm	--	--	1	2
On-call Dietitian	PRN	As needed	1	1	1	2

Food Service and Clinical Nutrition Manager	Day	6 am – 6 pm	1	1	1	1
Nutrition and Dietetics Technicians, Registered (NDTR)	Day	12 hours, with three breaks	4	8	13	20

* At a census level of 125 beds, the AM and PM food service dietitians can function as the clinical floor dietitians for patient care and production.
** A clinical floor dietitian is necessary at a census level of 250 beds to address nutrition consults and provide MNT to patients at risk for malnutrition who are receiving care in the ICU.
*** At census level of 375 patient beds, critical care dietitians become necessary to support active and consistent engagement with ICU patients and their medical team.

Role Descriptions

1. **Food Service RDs** provide nutrition care to patients to prevent malnutrition and optimize recovery. Primary responsibilities include:
    a. *AM Food Service RD:*
        i. Assessing menus and diet orders to ensure food items are appropriate;
        ii. Delivering meals safely at breakfast and lunch;
        iii. Confirming patient census, diet orders and creating diet production sheets;
        iv. Administering production sheets to NDTRs;
        v. Supervising NDTRs preparing meal delivery carts;
        vi. Overseeing diet order and food allergy questions/concerns;
        vii. Answering questions regarding diet orders and assisting with appropriate food substitutions;
        viii. Implementing and maintaining adherence to food safety and equipment sanitation protocols;
        ix. Ensuring food waste is properly discarded after meal delivery service;
        x. Checking floor nourishment par levels and confirming delivery of more stock items;
        xi. At census levels of <125 patients: assessing patients identified as at risk for malnutrition and providing nutrition consultations; and
        xii. At census levels of <250 patients: assisting clinical floor dietitians as needed.
    b. *PM Food Service RD:*
        i. Assessing menus and diet orders to ensure food items are appropriate;
        ii. Delivering meals safely at dinner;
        iii. Confirming patient census, diet orders and updating diet production sheets for dinner;
        iv. Administering production sheets to NDTRs;
        v. Supervising NDTRs preparing meal delivery carts;
        vi. Overseeing diet order and food allergy questions/concerns;

      vii.   Answering questions regarding diet orders and assisting with appropriate food substitutions;

    viii.   Implementing and maintaining adherence to food safety and equipment sanitation protocols;

       ix.   Ensuring food waste is properly discarded after meal delivery service;

        x.   At census levels of <125 patients: assessing patients identified at risk for malnutrition and providing nutrition consultations; and

       xi.   At census levels of <250 patients: assisting clinical floor dietitians as needed.

2. **Clinical RDs** provide nutrition care to patients to prevent malnutrition and optimize recovery. Primary responsibilities include:

    a.   *Clinical Floor RD:*

        i.   Providing nutrition care and management of patients in a general medicine setting;

       ii.   Interpreting physician diet orders and modifying patient diet according to diet patterns and patient preferences;

     iii.   Conducting clinical nutrition assessments on patients identified at risk for malnutrition via the Nutrition Screening Form or the Nutrition Consultation Form;

     iv.   Providing MNT recommendations (i.e., chronic disease management and strategies to improve food intake during hospital admission);

      v.   Making appropriate recommendations for nutrition care including but not limited to:

          1.   Oral supplements
          2.   Nutrition supplements
          3.   Food-drug interactions

     vi.   Communicating nutrition recommendations through appropriate medical documentation using the ADIME format;

    vii.   Completing calorie counts;

   viii.   Attending medical rounds and patient care plan meetings;

     ix.   Coordinating care with patient's primary care manager (PCM) and case management;

      x.   Communicating nutrition recommendations for assigned patients to food service staff; and

     xi.   Maintaining open communication between the hospital staff and Nutrition Operations.

    b.   *Clinical Critical Care RD:*

        i.   Conducting nutrition assessments on patients in the ICU;

       ii.   Interpreting physician diet orders and modifying patient diet according to diet patterns and patient preferences;

iii. Conducting clinical nutrition assessments on patients identified at risk for malnutrition via the Nutrition Screening Form or the Nutrition Consultation Form;

iv. Providing medical nutrition therapy recommendations including but not limited to:
   1. Enteral nutrition support
   2. Parenteral nutrition support
   3. Oral supplements
   4. Nutrition supplements
   5. Food-drug interactions

v. Communicating nutrition recommendations through appropriate medical documentation using the ADIME format;

vi. Attending medical rounds and patient care plan meetings with ICU team

vii. Coordinating care with patient's PCM and case management; and

viii. Performing patient handoff to floor dietitian if the patient is transferred out of the ICU.

3. **On-Call RDs** serve as backup dietitians in the event of an illness or emergency. On-call dietitians share the responsibilities of food service and clinical dietitians.

4. **Food Service and Clinical Nutrition Manager** provides leadership, oversight, and direction to both the food service and clinical staff. Primary responsibilities include:
   a. Attending field hospital leadership and operations meetings and monitoring staffing needs;
   b. Assessing menus and diet orders to ensure food items are appropriate;
   c. Leading the administration and coordination of the food service contract with the onsite vendor;
   d. Working with vendor, clinical staff, and field hospital leadership to assess and coordinate procurement of patient meals;
   e. Coordinating with vendors and production dietitians to assess appropriateness of food items for each diet order and obtaining allergen information for each food item;
   f. Leading communications with the clinical dietitians and assessing ongoing staffing needs; and
   g. Ensuring adherence to food safety and clinical nutrition policies.

5. **Nutrition and Dietetics Technicians, Registered (NDTR)** provide nutrition care to patients to prevent malnutrition and optimize recovery. Primary responsibilities include:
   a. Performing malnutrition screening using the Nutrition Screening Form and referring patients to a clinical dietitian as needed;
   b. Collecting data on patients' dietary preferences, food allergies and/or intolerances;
   c. Verifying diet ward rosters before each meal delivery;

d. Communicating roster updates to food service dietitians;
e. Preparing patient meal delivery carts;
f. Delivering patient meals;
g. Following food safety and equipment sanitation protocols; and
h. Supporting maintenance of Patient Census and Diet Order Tracker.

2.3. Two-day staffer training program

Purpose
The Training Program Syllabus is designed to orient new RDs and offer appropriate training on food service management, clinical nutrition, and nutrition support operations. These trainings should explain the organization of the field hospital, operational mandate for nutrition services, and coordinated protocol for simultaneously managing food services and performing clinical nutrition evaluations.

Utilization
This tool should be referenced during the planning phase of field hospital mobilizations and when onboarding new RDs. This comprehensive two-day training resource helps orient civilian RDs and offer appropriate training on food service management, clinical nutrition, and nutrition support operations for RDs who lack sufficient clinical experience.

Example of Training Program Syllabus

Training Preparation			
JNYMS Layout Orientation and Walk-Thru of Service Areas		Read Food Service and Clinical Operations Standard Operating Procedures	
Day 1 Schedule			
Time	**Nutrition Operations**	**Food Service Operations**	**Clinical Nutrition Operations**
0630-0700	• Arrive to JNYMS and report to Command Center. • Attend morning brief with USPHS Leaders.	• Arrive to JNYMS and report to Food Service Operations. • Review Patient Administration Division Tracker to identify newly admitted, transferred or discharged patients from JNYMS. • Review 'Diet Order Change and Supplement Request Form' from night shift. • Update 'Patient Census and Diet Order Tracker' and 'Diet Rosters.'	• Arrive to JNYMS and report to Clinical Nutrition Operations. • Review Patient Administration Division Tracker to identify newly admitted patients and current ICU census.
0700-0730		• Shadow NDTRs while they verify 'Diet Rosters.'	• Review consulting process. Collect and triage 'Nutrition

		• Update 'Patient Census and Diet Order Tracker' and 'Diet Rosters' no later than 0730.	Consultation Forms' from the night shift.
0730-0800		• Observe and assist NDTRs build meal delivery carts and begin delivering meals.	
0800-0930	• Observe Food Service Operations.	• Patient breakfast meal hours (0830-0930). • Review Patient Administration Division Tracker to identify newly admitted, transferred or discharged patients from JNYMS. • Update 'Patient Census and Diet Order Tracker' as needed.	• Observe Critical Care Nutrition Team. • Attend ICU rounds. • Review of medical documentation process using the 'Modified ADIME Note.' • Review 'Enteral Nutrition Formulary' and 'Enteral Nutrition Support Calculator.'
0930-1000		• Tally meals delivered by diet order type referencing the 'Diet Roster.' • Confirm total meals delivered with end of meal patient census. • Update 'Patient Census and Diet Order Tracker.' • Observe equipment sanitation procedures as NDTRs sanitize meal delivery carts.	
1000-1030	• Meet with Food Contractors.	• Review Patient Administration Division Tracker. • Update 'Patient Census and Diet Order Tracker' and 'Diet Rosters.' • Shadow NDTRs while they verify 'Diet Rosters' on assigned wards. • Update 'Patient Census and Diet Order Tracker' and 'Diet Rosters' no later than 1030.	
1030-1100		• Observe and assist NDTRs build meal delivery carts and begin delivering meals.	
1100-1200	• Observe Food Service Operations.	• Patient lunch meal hours (1100-1230). • Routinely monitor Patient Administration Division Tracker for newly admitted patients. • Update 'Patient Census and Diet Order Tracker' as needed.	• RD Lunch Break
1200-1230			• Shadow Floor Nutrition Team in the ICU.

1230-1300		• Tally meals delivered by diet order type referencing the 'Diet Roster.' • Confirm total meals delivered with end of meal patient census. • Update 'Patient Census and Diet Order Tracker.' • Observe equipment sanitation procedures as NDTRs sanitize meal delivery carts.	• Observe NDTRs while they conduct nutrition screening using the 'Nutrition Screening Form.' • Perform medical documentation using the 'Modified ADIME Note.' • Shift change briefings with late shift clinical RDs.
1300-1430	• RD lunch and shift change briefings with late shift Nutrition Ops RD.	• RD lunch break and shift change briefings with late shift food service RDs.	

Note: In order to maintain proper wellness of the JNYMS staff, breaks are coordinated amongst the teams and are not outlined in this schedule. All staff are strongly encouraged to take breaks as needed being mindful of eating/drinking constraints due to PPE while in JNYMS. Practice proper don/doff procedures per the field hospital's infection control team instructions.

3. Monitoring Inpatient Nutrition Status

3.1. Overview

Designed to improve the consistency and quality of individualized care for patients, RDs follow the Nutrition Care Process (NCP), established by the Academy of Nutrition and Dietetics (AND) that includes a Nutrition Assessment, Nutrition Diagnosis, Nutrition Intervention, and Nutrition Monitoring and Evaluation steps [18,19]. Specifically, Nutrition Monitoring and Evaluation is used to determine and measure the amount of progress made for the nutrition intervention and whether the nutrition related goals and expected outcomes are being met [20]. In order to assess such progress, RDs will frequently reference the patient's EMR; however, access to such systems is not always possible in humanitarian crises despite their importance in disaster-related medical responses [21–23]. We provide these tools to improve the resilience and continuity of care of health services using easily-adapted, ready-to-use patient nutrition status screeners, trackers, and nutrition status assessments.

3.2. Screener for inpatient nutrition status

Purpose

The Nutrition Screening Form is designed to collect nutrition-related information on all inpatients as efficiently as possible. This form was adapted from the Mini Nutritional Assessment and Subjective Global Assessment screening tools [24–26]. Questions specifically target the patients' ability to chew and swallow, food preferences, and food allergies to inform the composition and texture of therapeutic meals that patient receives.

Utilization

Prior to use, update the following fields:
- 'eFIND#' to the field hospital's/emergency facility's medical record numbering system
- 'Pod #' to the field hospital's/emergency facility's ward or floor division structure

This form can be used for initial and reassessment interviews by NTDRs to identify individuals at risk for malnutrition. A patient is classified as at risk for malnutrition and referred to a clinical dietitian if they report a 'fair' *or* 'poor appetite' appetite history *and* a 'recent' *and* 'unintentional' weight loss history. Patient-reported chewing or swallowing difficulties, cultural/religious food preferences, and food allergies should be communicated to food service staff. This information should also be updated on the Patient Census and Diet Order Tracker.

Example of Nutrition Screening Form

Nutrition Screening Form			
Patient Name *(Last Name, First Name Middle Initial)*	Doe, John S.	Date	January 1, 2020
		eFIND #	XXXXX
Pod #	3	Room #	20
Appetite History **(mark 'X' where applies)**		Weight Loss History **(mark 'X' where applies)**	

		Recent weight loss?		Reason for weight loss?	
Good (75-100% of meals)					
Fair (50-75% of meals)	X	*Yes*	X	*Intentional*	
Poor (<50% of meals)		*No*		*Unintentional*	X

Chewing/Swallowing Difficulties? (mark 'X' where applies)		Cultural/Religious Food Preferences (mark 'X' where applies)			
Yes		*Vegan*		*No Pork*	
		Vegetarian		*Kosher*	
No	X	*Other*		*None*	X

Describe 'Other' Cultural or Religious Food Preferences	

Food Allergies (mark 'X' where applies)					
Gluten/Wheat		*Fish/Shellfish*		*Peanut/Tree Nut*	
Lactose Intolerant		*Other*		*NKFA*	X

Describe 'Other' Food Allergies If Applicable	

*** For Nutrition Operations Personnel Only *** (mark 'X' where applies)			
Did patient report Fair or Poor 'Appetite History'?		*Yes*	X
		No	
Did patient report Recent and Unintentional 'Weight Loss History?'		*Yes*	X
		No	
If patient answered 'Yes' to both questions above, refer patient to RD.			
Name of NDTR providing screening		**Name of patient's assigned RD**	
NDTR 1		*Clinical RD 1*	

You can download this form as a blank template from the Appendix or from our website.

3.3. Modified ADIME note

Purpose

The Modified ADIME Note was adapted from Standardized Form 600: Chronological Record of Medical Care and the Nutrition Care Process note writing style [27–29]. ADIME stands for Assessment, Diagnosis, Intervention, Monitoring, and Evaluation – a five step process for examining the nutrition status of a patient. In the absence of an EMR, this reporting format prioritizes the assessment, diagnosis, and intervention components of ADIME, and enhances medical documentation efficiency.

Utilization

Prior to use, update the '*eFIND#*' to the field hospital's medical record numbering system. After providing individual MNT, clinical RDs should document their nutrition assessment, diagnosis, and intervention plan and recommendations using the Modified ADIME Note. This document

should be placed into the patient's medical record and steps should be taken to communicate nutrition recommendations with the patient's primary care manager to optimize continuity of care.

Example of Modified ADIME Note

<table>
<tr><td colspan="5" align="center">Modified ADIME Note</td></tr>
<tr>
<td align="center" rowspan="2"><i>Patient Name</i>
(Last Name, First Name Middle Initial)</td>
<td align="center" rowspan="2">Doe, John S.</td>
<td align="center"><i>Date</i></td>
<td align="center" colspan="2">January 1, 2020</td>
</tr>
<tr>
<td align="center"><i>eFIND #</i></td>
<td align="center" colspan="2">XXXXX</td>
</tr>
<tr>
<td align="center"><i>POD #</i></td>
<td align="center">3</td>
<td align="center"><i>Room #</i></td>
<td align="center" colspan="2">20</td>
</tr>
<tr><td colspan="5" align="center">Anthropometric Measurements</td></tr>
<tr>
<td align="center"><i>Age (yrs.)</i></td>
<td align="center">32</td>
<td align="center"><i>Gender</i></td>
<td align="center" colspan="2">M</td>
</tr>
<tr>
<td align="center"><i>Height (in.)</i></td>
<td align="center">69</td>
<td align="center"><i>Weight (lbs.)</i></td>
<td align="center" colspan="2">170</td>
</tr>
<tr>
<td align="center"><i>Ideal Body Weight (lbs.)</i></td>
<td align="center">156</td>
<td align="center"><i>% Ideal Body Weight (%)</i></td>
<td align="center" colspan="2">109%</td>
</tr>
<tr><td colspan="5" align="center">Laboratory Test Results</td></tr>
<tr>
<td align="center"><i>Na (mEq/L)</i></td>
<td align="center">137</td>
<td align="center"><i>K (mEq/L)</i></td>
<td align="center" colspan="2">4.1</td>
</tr>
<tr>
<td align="center"><i>Cl (ng/mL)</i></td>
<td align="center">97</td>
<td align="center"><i>Glucose (mg/dL)</i></td>
<td align="center" colspan="2">100</td>
</tr>
<tr>
<td align="center"><i>BUN (mg/dL)</i></td>
<td align="center">20</td>
<td align="center"><i>Creatinine (mg/dL)</i></td>
<td align="center" colspan="2">1.1</td>
</tr>
<tr>
<td align="center"><i>Other Labs</i>
(list any others that apply and their values)</td>
<td colspan="4"></td>
</tr>
<tr>
<td align="center"><i>Pertinent Medications</i></td>
<td colspan="4"></td>
</tr>
<tr>
<td align="center" rowspan="2"><i>Propofol</i>
(mark 'X' where applies)</td>
<td align="center"><i>Yes</i></td>
<td align="center"></td>
<td align="center" rowspan="2"><i>Propofol Rate:</i>
(if applicable)</td>
<td rowspan="2"></td>
</tr>
<tr>
<td align="center"><i>No</i></td>
<td align="center">X</td>
</tr>
<tr><td colspan="5" align="center">Estimated Nutritional Needs</td></tr>
<tr>
<td align="center" colspan="2"><i>Estimated Energy Needs</i></td>
<td align="center" colspan="3">1,932 kcal/day (25 kcal/kg)</td>
</tr>
<tr>
<td align="center" colspan="2"><i>Estimated Protein Needs</i></td>
<td align="center" colspan="3">78 g/day (1 g/kg)</td>
</tr>
<tr>
<td align="center" colspan="2"><i>Estimated Fluid Needs</i></td>
<td align="center" colspan="3">2,328 mL/day (30 mL/kg)</td>
</tr>
<tr><td colspan="5" align="center">Nutrition Assessment</td></tr>
<tr>
<td align="center"><i>Current Nutrient Intake</i></td>
<td colspan="4">Patient typically eats three meals per day, but over 1-2 weeks has experienced loss of appetite and struggles to eat more than once/day. Patient usually eats eggs and toast with a glass of milk for breakfast, grilled chicken salad with fruit and pretzels for lunch and 4-6 ounces of lean protein with a side of potatoes or pasta and a steamed vegetable. Patient now typically only eating toast with peanut butter and applesauce with a glass of orange juice.</td>
</tr>
</table>

Nutrition Focused Physical Exam Findings	Patient appears lean, athletic build.	
Nutrition Diagnosis		
Nutrition Diagnosis	Inadequate oral nutrient intake related to decreased ability to consume sufficient calories as evidenced by loss of appetite for 1-2 weeks prior to admission, decrease from 3 meals per day to 1 meal per day.	
Nutrition Recommendations		
Nutrition Recommendations	Encouraged small frequent meals. Recommend patient consume protein sources at mealtime first to optimize nutrient intake and preserve lean muscle mass. Patient receptive to trying Ensure Plus with lunch meal.	
Follow Up Date	**RD Name, Signature & Contact Information**	
January 4, 2020	Clinical RD 1 (XXX) XXX-XXXX	

You can download this form as a blank template from the Appendix or from our website.

3.4. Tracker for patient census and diet orders

Purpose

The Patient Census and Diet Order Tracker is designed to facilitate meal forecasting in a disaster response setting. This is done by recording the number of patients consuming different types of meals over pre-determined mealtimes in a field hospital. Daily and weekly tallies of delivered meals can be used to estimate the popularity of food supplies in the patient population. This tracker also serves as a quality control tool in which the total number of meals delivered per food service period (e.g., breakfast, lunch, and dinner) can be matched to the current patient census.

Utilization

This tool is available as a weekly hard-copy tracker or as a modifiable Excel file. Prior to use, update the following fields:
- '*Diet Orders*' to reflect the diet order types available at the field hospital; and
- '*Date*' to ensure that the start date of each week is the day that meal forecasts must be distributed to the food suppliers.

This tracker carefully integrates with diet order and food allergy information to serve as a monitoring tool for successful and accurate meal delivery. This is done by recording the number of persons served for breakfast, lunch, and dinner according to each diet order. After each week, total meals served provides an estimate of the number of meals needed for the next week. This inventory assessment helps maintain adequate forecasting of supplies with food contractors. Additionally, this tool helps maintain proper food safety assurance and meal delivery coverage in accordance with USPHS Food Safety regulations.

Example of Patient Census and Diet Order Tracker

| | 7-Mar | | | | 8-Mar | | | | WEEKLY TOTALS | |
| | SUNDAY | | | | MONDAY | | | | | |
	B	L	D		B	L	D			
MEALS SERVED	329	332	339		361	353	347		7120	
TOTAL CENSUS	329	319	330		343	333	340		7014	
DIET ORDERS										**% OF MEALS SERVED**
CORE4*	300	297	306		320	315	316		6138	86.21
RENAL	11	5	0		0	1	1		32	0.45
GI SOFT	3	7	10		7	6	6		120	1.69
NDD2&3	0	0	0		4	4	5		129	1.81
PUREED	0	0	0		0	0	1		17	0.24
FULL LIQUID	0	0	0		0	0	0		5	0.07
CLEAR LIQUID	0	0	0		0	0	0		1	0.01
NPO	2	0	0		0	0	0		12	0.17
KOSHER	6	8	9		11	7	9		219	3.08
DAIRY FREE	7	15	14		19	20	9		300	4.21
VEGETARIAN/ VEGAN	0	0	0		0	0	0		54	0.76
GLUTEN FREE	0	0	0		0	0	0		9	0.13
NUTRITION SUPPORT	0	0	0		0	0	0		84	1.18

* Core 4 suitable for 'Regular,' 'Low Fat', 'Low Sodium,' and 'Carb Controlled' diet orders.

You can download this form as a blank template from our website.

Overview of Patient Census and Diet Order Tracker Calculations
1. One hour prior to meal delivery, personnel charged with delivering meals to patients should update the 'Total Census' with the number of patients in hospital (Example A).
2. The tracker should then be distributed to food service personnel responsible for producing and supplying meals to inpatients.
3. Food service personnel should calculate the correct quantity and type of meals by multiplying the total patient census and the percentage of orders per diet order type. Food service personnel will then package, store, and deliver meals in accordance with standard processes.
4. Within 30 minutes of meal delivery to patients, meal delivery personnel should:
   a. Tally diet orders per hospital ward to provide a total number of meals served by diet order type.
   b. Update the tracker with the total number of meals distributed to all patients.
   c. Compare the alignment of total 'Meals Served' to the 'Total Census' (Example A).
      i. In the Excel version, 'Meals Served' auto calculates the sum of all meals delivered by diet order type to an aggregate total.
5. Discrepancies between meals served and patient census totals should be addressed by food service personnel in the following ways:

      a. If fewer meals than the total census were served:
- i. Verify the current hospital census at the end of the meal period and identify if patients were discharged during meal delivery.
- ii. Verify diet ward rosters to ensure that all patients identified at the beginning of the meal period received a meal.
- iii. Identify new hospital admissions during meal delivery and provide appropriate meal options in accordance with medical and nutritional prognoses.

      b. If more meals than the total census were served:
- i. Identify if and how many double-portion diet orders were placed by medical or nutritional staff.
- ii. Provide a note indicating which patient(s) received double portions to properly adjust diet order tallies.

6. Once all daily values are verified, report the sum of all 'Meals Served' and 'Diet Orders' in the 'Weekly Totals' column (Example B).
      a. In the Excel version, 'Weekly Totals' for 'Meals Served' and 'Diet Orders' will auto-populate.
      b. Distribute the completed tracker to food suppliers once data have been finalized on the seventh day of the weekly cycle.
      c. Calculate the '% of Meals Served' per diet order by dividing the 'Weekly Totals for *Diet Order 1'* by the 'Weekly Total of Meals Served' and multiplying the output by 100.
- i. The sum of all the '% of Meals Served' should total 100%

7. Use the product of the '% of Meals Served' and weekly total of each diet order to facilitate meal forecasting for the following weekly cycle.

3.5. Diet roster

<u>Purpose</u>
The Diet Roster is designed to quickly identify patients' diet orders, food allergies, and oral nutrition supplement requirements during meal delivery. The roster should be completed for every patient ward or floor by the assigned NDTR. This form should be reviewed and updated regularly as patients are admitted and discharged.

<u>Utilization</u>
First, update the '*eFIND#*' to the field hospital's medical record numbering system. Prior to meal delivery, NDTRs should review the patient's medical record to verify their diet order, food allergy information, and oral nutrition supplement requirements. This information should be transcribed onto the diet roster. This form is then referenced when building patient meal delivery carts. After the patient meal is delivered, NDTRs cross off the appropriate 'Meal Delivered' column ('B' for breakfast, 'L' for lunch, and 'D' for dinner). After all patients on the assigned ward or floor have received a meal, the NDTR submits the roster to the food service dietitian. The food service dietitian then uses the roster to:

- Determine the number of meals delivered per meal period (used in the Patient Census and Diet Order Tracker); and
- Update the Patient Census and Diet Order Tracker with changes to diet orders or oral nutrition supplement requirements and food allergy information.

<u>Example of Diet Roster Form</u>

Diet Roster									
Date			January 1, 2020		**Pod #**			3	
Line	*Bed/Room*	*Patient Name* (Last Name, First Name Middle Initial)	*eFIND#*	*Diet Order*	*Food Allergies*	*Oral Nutrition Supplements*	*Meal Delivered*		
1	10	Doe, John S.	XXXXX	Renal	None	None	B	L	D
2	12	Smith, Jane	YYYYY	Core4	Nuts	Glucerna with Breakfast	B	L	D
3	…	…	…	…	…	…	B	L	D
Provide this form to the food service dietitian at the end of meal delivery. Discuss changes to ward roster, barriers to delivering patient meals, etc.				**Name of NDTR assigned to Ward**					
				NDTR 1					

You can download this form as a blank template from the Appendix or from our website.

4. Receiving Nutrition Concerns from Field Hospital Staff

4.1. Overview

        Registered Dietitians frequently work hand-in-hand with primary care providers as part of a multidisciplinary healthcare team to deliver coordinated care. RDs are an integral part of a patient's health care, as they are trained to assess the nutrition-related health needs of patients, considering other factors affecting nutrition and health status (e.g., culture, ethnicity, and social determinants of health), provide nutrition counseling and nutrition education to optimize nutritional status, prevent disease, or maintain and/or improve health and well-being [19]. Research has shown consulting a RD in primary care settings appear effective for improving diet quality, diabetes outcomes, and weight loss outcomes [30]. However, additional studies have found low referral rates from primary care clinicians to a RD amongst the most vulnerable patients such as those at risk of malnutrition [31].

4.2. Nutrition consultation form

Purpose
The Nutrition Consultation Form is designed to streamline requests from the patient's primary care manager or nursing team for nutrition consultation by a clinical RD. This consultation is designed to be conducted with limited contact time (<5 minutes), performed at a distance (to accommodate medical personnel safety), and integrate assessments, recommendations, and educational needs within the same form.

Utilization
Prior to use, update the '*eFIND#*' to the field hospital's medical record numbering system. The patient's primary care manager or nursing team should complete the Nutrition Consultation Form when requesting nutrition assessment or education from a clinical RD.

Example of Nutrition Consultation Form

Nutrition Consultation Form			
Requesting PCM *(Last Name, First Name Middle Initial)*	Doctor 1	*Requesting PCM* *Contact Information* *(pager or cell number)*	(XXX) XXX-XXXX
Patient Information			
Patient Name *(Last Name, First Name Middle Initial)*	Doe, John S.	*Date*	January 1, 2020
		eFIND #	XXXXX
POD #	3	*Room #*	20
Patient Nutrition Status			

Is this consultation regarding patient's nutrient intake, including concerns for malnutrition, chewing/swallowing, etc.? *(mark 'X' where applies)*	*Yes*	
	No	X
If 'Yes,' describe.		

Patient Nutrition Recommendations		
Is this consultation regarding nutrition support recommendations? *(mark 'X' where applies)*	Yes	
	No	X
If 'Yes,' describe.		

Patient Nutrition Education Recommendations		
Is this consultation for nutrition education? *(mark 'X' where applies)*	Yes	X
	No	
If 'Yes,' describe patient's nutrition education needs	Patient newly diagnosed with hypertension, please provide appropriate nutrition instruction to optimize heart health.	

*** For Nutrition Operations Personnel Only ***	
Name of clinical RD assigned to address this nutrition consultation	Clinical RD 1

You can download this form as a blank template from the Appendix or from our website.

4.3. Diet order change and supplement request form

Purpose
The Diet Order Change and Supplement Request Form is designed to streamline changes in diet orders and/or oral nutrition supplements requested by the patient's primary care manager. This is of particular importance if a field hospital lacks an EMR for recording patient nutrition and medical status. Furthermore, such a form can ensure that therapeutic meals reconcile with medical prognoses and treatments.

Utilization
Prior to use, update the '*eFIND#*' to the field hospital's medical record numbering system. The patient's primary care manager should complete the Diet Order Change and Supplement Request Form following a new diet order and/or prescription for an oral nutrition supplement. If an oral nutrition supplement is selected, the frequency and timing of supplement delivery must also be selected. This form is then submitted to Nutrition Operations personnel or the designated personnel's mailbox. Food service dietitians then update the Patient Census and Diet Order Tracker with the changes.

Example of Diet Order Change and Supplement Request Form

Diet Order Change and Supplement Request Form				
Patient Name *(Last Name, First Name Middle Initial)*	Doe, John S	*Date*	1 January, 2020	
		eFIND #	XXXXX	
POD #	3	*Room #*	20	
Select the New Diet Order for Patient (mark 'X' where applies)				
Regular/Consistent Carb/Heart Healthy/Low Sodium		*National Dysphagia Diet (Ground)*		
Renal		*Puree*		
Kosher		*Full Liquid*		
Dairy-Free		*Clear Liquid*		
Select a Nutrition Supplement (mark 'X' where applies)		**Frequency/Timing of Supplement Delivery** (mark 'X' where applies)		
Ensure Plus	X	*1x per day*		*Breakfast*	
Glucerna		*2x per day*	X	*Lunch*	X
Nepro		*3x per day*		*Dinner*	X
*** For Nutrition Operations Personnel Only *** (mark 'X' where applies)				
Has the 'Patient Census and Diet Order Tracker' been updated?		*Yes*	X	
		No		
Name of food service RD confirming the 'Patient Census and Diet Order Tracker'		*Food Service RD 1*		

You can download this form as a blank template from the Appendix or from our website.

4.4. Food temperature log

Purpose
The Food Temperature Log is designed to monitor and record food temperatures to ensure food is safe when stored, prepared, and served. This is of particular importance when meal preparation occurs at an off-site facility and must be transported to the field hospital for before each meal delivery.

Utilization

One log is needed per day of patient meal delivery. Nutrition staff and personnel should perform temperature checks on a predetermined sample proportion of meals and/or food items per meal period. If there is a discrepancy between the temperature taken and the appropriate temperature to maintain food safety, the food service dietitian is alerted and implements a corrective action.

- Appropriate cold chain management: ≤41°F (5°C)
- Appropriate hot chain management: >135°F (57°C)

Patient Food Temperature Log					
Date		January 1, 2020		**Pod #**	3
Breakfast Meal Delivery					
Time	*Meal Type*	*Food Item*	*Measured Temp. (°F)*	*Corrective Action*	*Initials of Person Recording the Temp.*
6:45 AM	Core4	Milk	39°	N/A	RD1
6:47 AM	Core4	Vanilla Yogurt	40°	N/A	RD1
6:50 AM	Core4	String Cheese	42°	Return to fridge for cooling before served	RD1
Lunch Meal Delivery					
11:45 AM	Core4	Beef Pot Roast	139°	N/A	RD1
11:57 AM	Core4	Chocolate Pudding	39°	N/A	RD1
12:04 AM	Core4	Steamed Carrots	140°	NA	RD1
Dinner Meal Delivery					
4:55 AM	Core4	Tomato Soup	134°	Warm for additional 2 minutes before served	RD1
4:59 AM	Core4	Fruit Cup	39°	N/A	RD1
5:12 AM	Core4	Unsweetened Apple Sauce	41°	NA	RD1

You can download this form as a blank template from the Appendix or from our website.

5. Calculating Patient Nutrition Support Needs

5.1. Overview

The scope of practice for RDs also includes the ordering and monitoring of nutrition interventions to meet estimated nutrient and energy needs, including but not limited to prescribed diets, medical foods, dietary supplements, and nutrition support therapies (i.e., enteral nutrition support) [19]. The Academy of Nutrition and Dietetics offers few calculators, via the 'Nutrition Care Manual,' to estimate a body mass index and energy requirements or perform metric conversions, which are essential to the NCP [32]. However, a gap exists for similar tools when calculating a patient's nutrition support needs. The American Society of Parenteral and Enteral Nutrition does offer an algorithmic practice tools to aid decisions surrounding the appropriateness of nutrition support therapies, but, yet again, a practice tool or calculator for the everyday clinician is missing [33].

5.2. Guide for enteral formulary

Purpose

The Enteral Nutrition Formulary Guide is designed to provide a comprehensive overview of nutrition information provided by oral nutrition supplements, enteral nutrition formulas, and modulars. This tool is provided to help identify key macronutrient and micronutrient levels in each supplement, formula, or modular for calculating recommended doses.

Utilization

This tool is available as a modifiable Excel file. Prior to use, update this formulary based on available oral nutrition supplements, enteral nutrition formulas, and modulars. This information can often be found on the product's nutrition facts label or from the supplier's website. Once updated, this tool should be referenced when calculating a patient's estimated nutrient requirements and when discussing available oral nutrition supplements, enteral nutrition formulas and modulars with other healthcare professionals.

Example of Enteral Nutrition Formulary Guide

Enteral Nutrition Formulary Guide									
Enteral Formulas									
Name	Calories (kcal)	Protein (g)	Carbohydrates (g)	Fat (g)	Fiber (g)	Sodium (mg)	Potassium (mg)	Phosphorous (mg)	Water (mL)
Promote 1.0 (per carton)	237	14.8	30.8	6.2	--	240	470	285	198
Promote 1.0 (per liter)	1000	62.5	130	26	--	1000	1980	1200	839

Jevity 1.2 (per carton)	285	13.2	40.2	9.3	4	253	566	284	191
Jevity 1.2 (per liter)	1200	55.5	168.4	39.3	17	1067	2390	1200	807
Oral Nutrition Supplements									
Ensure Plus (Vanilla & Chocolate)	350	13	51	11	3	220	470	275	-
Glucerna (Vanilla & Chocolate)	180	10	16	9	4	210	470	275	-
Nepro (Vanilla)	425	19.1	37.9	22.7	3	250	250	170	-
Modulars									
Prosource	40	11	<1	0	-	35	11	48	-
Banatrol	40	<1	10	0	-	45	120	9	-

You can download this form as a blank template from our website.

5.3. Enteral nutrition recommendation calculator

Purpose
The Enteral Nutrition Support Calculator is designed to support RDs when calculating the provision of calories, protein, and fluid for various enteral nutrition formulas. This calculator is meant to provide a quick reference for field hospital clinical nutrition staff and aims to improve efficiency and reduce errors when estimating patients' nutrition support requirements. Details on nutrient provision should be ascertained from the enteral nutrition formula's manufacturer's website.

Utilization
This tool is available as a modifiable Excel file. Prior to use, update the Enteral Nutrition Formulary Guide tool for quick reference when completing 'Part B: Select enteral nutrition formula'

Enteral Nutrition Support Calculator				
Part A. Re-calculate patient weight				
Patient Weight (lbs)		*Patient Weight (kg)*		
150		68.18		
Part B: Select enteral nutrition formula				
Formula Name	*Calories* (Kcal/mL)	*Protein Per Liter* (g protein/L formula)	*Water Per Liter* (mL water/L formula)	*Formula Volume* (mL/container)

Promote	1.0	62.5	839	1000

Part C: Recommended hourly rate and length of administration		
Hourly Goal Rate (mL/hr)	*Length of Administration (hr)*	*Total Volume (mL)*
55	24	1320

Part D: Calculate enteral nutrition support recommendations		
Calories Per Day *(Kcal/d)*	*Protein Per Day* *(g protein/d)*	*Water Per Day* *(mL water/d)*
1320	82.5	1107.3
Calories Per Weight *(Kcal/kg patient)*	*Protein Per Weight* *(g protein/kg patient)*	*Containers Formula Per Day* *(containers/d)*
19.4	1.21	1.3
Notify Food Service Personnel Once Completed		

You can download this form as a blank template from our website.

<u>Overview of Patient Census and Diet Order Tracker Calculations</u>

1. To use the Enteral Nutrition Support Calculator, being by converting the patient's weight from pounds to kilograms in '*Part A: Re-calculate patient weight.*' This step must be completed to calculate the calories and protein provided by formulary per kilogram patient weight in '*Part D: Calculate enteral nutrition support recommendations.*'
    a. Enter the patient's weight in pounds in the yellow cell to convert the weight from pounds to kilograms (calculated in adjacent white cell).
2. Update '*Part B: Select enteral nutrition formula*' with information from the Enteral Nutrition Formulary Guide tool. The information entered in the yellow cells includes:
    a. Calories provided per milliliter of selected formula;
    b. Protein provided per liter of the selected enteral formula;
    c. Water provided per liter of the selected enteral formula; and
    d. Milliliters of formula per container of the selected enteral formula.
3. Update '*Part C: Recommend hourly rate and length of admission*' with your recommended hourly rate and total hours of administration per day to auto calculate the 'Total Volume (mL)' of enteral nutrition provided per day. The information entered in the yellow cells includes:
    a. The recommended hourly rate of enteral nutrition administration; and
    b. The recommended total hours of enteral nutrition formula administration per day.
4. Review the auto-calculations performed in '*Part D: Calculate enteral nutrition support recommendations,*' which include:
    a. 'Calories per Day (kcal/d)' calculated as the product of the total volume of formula delivered from '*Part C: Recommend hourly rate and length of admission*' and the calories per milliliter of enteral nutrition formula from '*Part B: Select enteral nutrition formula;*'

b. 'Calories per Patient Weight (kcal/kg patient)' calculated as the quotient of the 'Calories Per Day (kcal/d)' calculated above and the patient weight in kilograms from '*Part A: Re-calculate patient weight;*'

c. 'Protein per Day (g protein/d)' calculated as the product of the protein per one liter (or one thousand milliliters) formula from '*Part B: Select enteral nutrition formula*' and the total volume of formula delivered from '*Part C: Recommend hourly rate and length of admission;*'

d. 'Protein per Patient Weight (g protein/kg patient)' calculated as the quotient of the 'Protein Per Day (g protein/d)' calculated above and the patient weight in kilograms from '*Part A: Re-calculate patient weight;*'

e. 'Water per Day (mL water/d)' calculated as the product of the water per one liter formula (or one thousand milliliters) from '*Part B: Select enteral nutrition formula*' and the total volume of formula delivered from '*Part C: Recommend hourly rate and length of admission;*' and

f. 'Containers Formula per Day (containers/d)' calculated as the quotient of the total volume of formula delivered from '*Part C: Recommend hourly rate and length of admission*' and the total volume of the formula per container from '*Part B: Select enteral nutrition formula.*'

5. Communicate nutrition support recommendations, specifically the number of cartons or liters recommended for your patient, to food service personnel tasked with delivering meals. Limit enteral nutrition support recommendations to only the calculations appropriate for your available enteral nutrition formulary.

Future Directions

As the COVID-19 pandemic continues, we call upon the broader research and practice community, including the Academy of Nutrition and Dietetics, to develop guidelines for nutrition services in medical facilities. These guidelines must target training competencies for RDs, NDTRs, and other nutrition-related personnel providing medical care in field hospitals or emergency facilities during humanitarian crises. While the Nutrition Response Toolkit for Humanitarian Crises provides a foundation for such services, this toolkit must be expanded to enhance the scalability and generalizability of these tools for future emergency response efforts. This can only be done by collaborating with other medical and nutrition service professionals, who together can document shared and new experiences that warrant new tools for field response-related challenges. We welcome this future collaboration, and hope that these low-cost, easily-adaptable nutrition services and assessments tools can be aid nutrition personnel in future field hospital deployments and humanitarian emergencies.

Authors and Acknowledgements

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Appendices

Appendix 1. Fillable Nutrition Screening form (section 3.2)
The Nutrition Screening Form is designed to collect nutrition-related information on all inpatients as efficiently as possible. This form was adapted from the Mini Nutritional Assessment and Subjective Global Assessment screening tools [24–26]. Questions specifically target the patients' ability to chew and swallow, food preferences, and food allergies to inform the composition and texture of therapeutic meals that patient receives.

Appendix 2. Fillable form of the Modified ADIME Note (section 3.3)
The Modified ADIME Note was adapted from Standardized Form 600: Chronological Record of Medical Care and the Nutrition Care Process note writing style [27–29]. ADIME stands for Assessment, Diagnosis, Intervention, Monitoring, and Evaluation – a five step process for examining the nutrition status of a patient. In the absence of an EMR, this reporting format prioritizes the assessment, diagnosis, and intervention components of ADIME, and enhances medical documentation efficiency.

Appendix 3. Fillable form of the Diet Roster (section 3.5)
The Diet Roster is designed to quickly identify patients' diet orders, food allergies, and oral nutrition supplement requirements during meal delivery. The roster should be completed for every patient ward or floor by the assigned NDTR. This form should be reviewed and updated regularly as patients are admitted and discharged.

Appendix 4. Fillable Nutrition Consultation form (section 4.2)
The Nutrition Consultation Form is designed to streamline requests from the patient's primary care manager or nursing team for nutrition consultation by a clinical RD. This consultation is designed to be conducted with limited contact time (<5 minutes), performed at a distance (to accommodate medical personnel safety), and integrate assessments, recommendations, and educational needs within the same form.

Appendix 5. Fillable Diet Order Change and Supplement Request form (section 4.3)
The Diet Order Change and Supplement Request Form is designed to streamline changes in diet orders and/or oral nutrition supplements requested by the patient's primary care manager. This is of particular importance if a field hospital lacks an EMR for recording patient nutrition and medical status. Furthermore, such a form can ensure that therapeutic meals reconcile with medical prognoses and treatments.

Appendix 6. Fillable form of the Food Temperature Log (section 4.4)
The Food Temperature Log is designed to monitor and record food temperatures to ensure food is safe when stored, prepared, and served. This is of particular importance when meal preparation occurs at an off-site facility and must be transported to the field hospital for before each meal delivery.

Nutrition Screening Form

Patient Name *(Last Name, First Name Middle Initial)*		Date	
		eFIND #	
Pod #		Room #	

Appetite History **(mark 'X' where applies)**		Weight Loss History **(mark 'X' where applies)**			
		Recent weight loss?		**Reason for weight loss?**	
Good (75-100% of meals)					
Fair (50-75% of meals)		Yes		Intentional	
Poor (<50% of meals)		No		Unintentional	

Chewing/Swallowing Difficulties? **(mark 'X' where applies)**		Cultural/Religious Food Preferences **(mark 'X' where applies)**			
		Vegan		No Pork	
Yes					
		Vegetarian		Kosher	
No					
		Other		None	
Describe 'Other' Cultural or Religious Food Preferences					

Food Allergies **(mark 'X' where applies)**					
Gluten/Wheat		Fish/Shellfish		Peanut/Tree Nut	
Lactose Intolerant		Other		NKFA	
Describe 'Other' Food Allergies If Applicable					

*** For Nutrition Operations Personnel Only *** **(mark 'X' where applies)**		
Did patient report Fair or Poor 'Appetite History'?	Yes	
	No	
Did patient report Recent and Unintentional 'Weight Loss History?'	Yes	
	No	
If patient answered 'Yes' to both questions above, refer patient to RD.		

Name of NDTR providing screening	Name of patient's assigned RD

Modified ADIME Note

Patient Name (Last Name, First Name Middle Initial)		Date	
		eFIND #	
POD #		Room #	

Anthropometric Measurements

Age (yrs.)		Gender	
Height (in.)		Weight (lbs.)	
Ideal Body Weight (lbs.)		% Ideal Body Weight (%)	

Laboratory Test Results

Na (mEq/L)		K (mEq/L)	
Cl (ng/mL)		Glucose (mg/dL)	
BUN (mg/dL)		Creatinine (mg/dL)	

Other Labs (list any others that apply and their values)	

Pertinent Medications	

Propofol (mark 'X' where applies)	Yes		Propofol Rate: (if applicable)	
	No			

Estimated Nutritional Needs

Estimated Energy Needs	
Estimated Protein Needs	
Estimated Fluid Needs	

Nutrition Assessment	
Current Nutrient Intake	
Nutrition Focused Physical Exam Findings	
Nutrition Diagnosis	
Nutrition Diagnosis	
Nutrition Recommendations	
Nutrition Recommendations	

Follow Up Date	RD Name, Signature & Contact Information

							Diet Roster		

	Date				Pod #					

Line	Bed/Room	Patient Name (Last Name, First Name Middle Initial)	eFIND#	Diet Order	Food Allergies	Oral Nutrition Supplements	Meal Delivered		
1							B	L	D
2							B	L	D
3							B	L	D
4							B	L	D
5							B	L	D
6							B	L	D
7							B	L	D
8							B	L	D
9							B	L	D
10							B	L	D
11							B	L	D
12							B	L	D
13							B	L	D
14							B	L	D
15							B	L	D

Provide this form to the food service dietitian at the end of meal delivery. Discuss changes to ward roster, barriers to delivering patient meals, etc.	Name of NDTR assigned to Ward

Nutrition Consultation Form

Requesting PCM *(Last Name, First Name Middle Initial)*		Requesting PCM Contact Information *(pager or cell number)*	

Patient Information

Patient Name *(Last Name, First Name Middle Initial)*		Date	
		eFIND #	
POD #		Room #	

Patient Nutrition Status

Is this consultation regarding patient's nutrient intake, including concerns for malnutrition, chewing/swallowing, etc.? *(mark 'X' where applies)*	Yes	
	No	

If 'Yes,' describe.	

Patient Nutrition Recommendations

Is this consultation regarding nutrition support recommendations? *(mark 'X' where applies)*	Yes	
	No	

If 'Yes,' describe.	

Patient Nutrition Education Recommendations

Is this consultation for nutrition education? *(mark 'X' where applies)*	Yes	
	No	

If 'Yes,' describe patient's nutrition education needs	

*** For Nutrition Operations Personnel Only ***

Name of clinical RD assigned to address this nutrition consultation	

Diet Order Change and Supplement Request Form

Patient Name *(Last Name, First Name Middle Initial)*		Date	
		eFIND #	
POD #		Room #	

Select the New Diet Order for Patient
(mark 'X' where applies)

Regular/Consistent Carb/Heart Healthy/Low Sodium		National Dysphagia Diet (Ground)	
Renal		Puree	
Kosher		Full Liquid	
Dairy-Free		Clear Liquid	

Select a Nutrition Supplement (mark 'X' where applies)		**Frequency/Timing of Supplement Delivery** (mark 'X' where applies)			
Ensure Plus		1x per day		Breakfast	
Glucerna		2x per day		Lunch	
Nepro		3x per day		Dinner	

*** For Nutrition Operations Personnel Only ***
(mark 'X' where applies)

Has the 'Patient Census and Diet Order Tracker' been updated?		Yes	
		No	
Name of food service RD confirming the 'Patient Census and Diet Order Tracker'			

Patient Food Temperature Log					
Date		**Pod #**			
Breakfast Meal Delivery					
Time	*Meal Type*	*Food Item*	*Measured Temp. (°F)*	*Corrective Action*	*Initials of Person Recording the Temp.*
Lunch Meal Delivery					
Breakfast Meal Delivery					

Nutrition Response Toolkit for Humanitarian Crises, June 2021

MEAL TIMES
Breakfast 8AM
Lunch 12PM
Dinner 5PM

NUTRITIONAL
MEDICINE