Academy of Nutrition and Dietetics: Revised 2019 Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists (Competent, Proficient, and Expert) in Nutrition in Integrative and Functional Medicine

Diana Noland, MPH, RDN, LD; Sudha Raj, PhD, RDN, FAND

ABSTRACT

Nutrition in integrative and functional medicine encompasses a patient-/client-centered, healing-oriented approach to health that embraces both conventional and complementary therapies. Registered dietitian nutritionist (RDN) practitioners in integrative and functional medicine focus on nutrition care that is both preventative and interventional in addressing the root causes of disease. The Dietitians in Integrative and Functional Medicine Dietetic Practice Group, along with the Academy of Nutrition and Dietetics Quality Management Committee, have updated the Standards of Practice (SOP) and Standards of Professional Performance (SOPP) for RDNs working in nutrition in integrative and functional medicine. The SOP and SOPP for RDNs in Nutrition in Integrative and Functional Medicine provide indicators that describe three levels of practice: competent, proficient, and expert. The SOP uses the Nutrition Care Process and clinical workflow elements for delivering patient/client care. The SOPP describes the following six domains that focus on professional performance: Quality in Practice, Competence and Accountability, Provision of Services, Application of Research, Communication and Application of Knowledge, and Utilization and Management of Resources. Specific indicators outlined in the SOP and SOPP depict how these standards apply to practice. The SOP and SOPP are complementary resources for RDNs and are intended to be used as a self-evaluation tool for assuring competent practice in nutrition in integrative and functional medicine and for determining potential education and training needs for advancement to a higher practice level in a variety of settings.
J Acad Nutr Diet. 2019;119(6):1019-1036.

Editor's note: Figures 1 and 2 that accompany this article are available online at www.jandonline.org.

THE DIETITIANS IN INTEGRATIVE and Functional Medicine Dietetic Practice Group (DIFM DPG) of the Academy of Nutrition and Dietetics (Academy), under the guidance of the Academy Quality Management Committee, has revised the Standards of Practice (SOP) and Standards of Professional Performance (SOPP) for Registered Dietitians in Integrative and Functional Medicine published previously in 2011.[1] The revised document, Academy of Nutrition and Dietetics: Revised 2019 Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) (Competent, Proficient, and Expert) in Nutrition in Integrative and Functional Medicine (NIFM), reflects advances in integrative and functional medicine practice during the past 8 years and replace the 2011 Standards. This document builds on the Academy of Nutrition and Dietetics: Revised 2017 SOP in Nutrition Care and SOPP for RDNs.[2] The Academy/Commission on Dietetic Registration (CDR) Code of Ethics, revised in 2018,[3] along with the Academy of Nutrition and Dietetics: Revised 2017 SOP in Nutrition Care and SOPP for RDNs[2] and Revised 2017 Scope of Practice for the RDN,[4] guide the practice and performance of RDNs in all settings.

Scope of practice in nutrition and dietetics is composed of statutory and individual components; includes the code(s) of ethics (eg, Academy/CDR, other organizations, and/or employer code of ethics); and encompasses the range of roles, activities, practice guidelines, and regulations within

https://doi.org/10.1016/j.jand.2019.02.010

Approved January 2019 by the Quality Management Committee of the Academy of Nutrition and Dietetics (Academy) and the Executive Committee of the Dietitians in Integrative and Functional Medicine Dietetic Practice Group of the Academy. ***Scheduled review date: September 2025.*** *Questions regarding the Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists in Nutrition in Integrative and Functional Medicine may be addressed to Academy Quality Management Staff: Dana Buelsing, MS, manager, Quality Standards Operations; and Carol Gilmore, MS, RDN, LD, FADA, FAND, scope/standards of practice specialist, Quality Management, at quality@eatright.org.*

All registered dietitians are nutritionists—but not all nutritionists are registered dietitians. The Academy's Board of Directors and Commission on Dietetic Registration have determined that those who hold the credential Registered Dietitian (RD) may optionally use "Registered Dietitian Nutritionist" (RDN). The two credentials have identical meanings. In this document, the authors have chosen to use the term RDN to refer to both registered dietitians and registered dietitian nutritionists.

which RDNs perform. For credentialed practitioners, scope of practice is typically established within the practice act and is interpreted and controlled by the agency or board that regulates the practice of the profession in a given state.[4] An RDN's statutory scope of practice can delineate the services an RDN is authorized to perform in a state where a practice act or certification exists. For more information, see www.eatrightpro.org/advocacy/licensure/licensure-map.

The RDN's individual scope of practice is determined by education, training, credentialing, experience, and by demonstrating and documenting competence to practice. Individual scope of practice in nutrition and dietetics has flexible boundaries to capture the breadth of the individual's professional practice. Professional advancement beyond the core education and supervised practice to qualify for the RDN credential provides practice opportunities, such as expanded roles within an organization based on training and certifications, if required; or additional credentials (eg, focus area CDR specialist certification, if applicable; Certified Nutrition Support Clinician [CNSC], Certified Case Manager [CCM], or Certified Professional in Healthcare Quality [CPHQ]). The Scope of Practice Decision Algorithm (www.eatrightpro.org/scope) guides an RDN through a series of questions to determine whether a particular activity is within his or her individual scope of practice. The algorithm is designed to assist an RDN to critically evaluate his or her personal knowledge, skill, experience, judgment, and demonstrated competence using criteria resources.[5]

The Centers for Medicare and Medicaid Services (CMS), Department of Health and Human Services Hospital[6] and Critical Access Hospital[7] Conditions of Participation now allow a hospital and its medical staff the option of including RDNs or other clinically qualified nutrition professionals within the category of "nonphysician practitioners" eligible for ordering privileges for therapeutic diets and nutrition-related services, if consistent with state law and health care regulations. RDNs in hospital settings interested in obtaining ordering privileges must review state laws (eg, licensure, certification, and title protection), if applicable, and health care regulations to determine whether there are any barriers or state-specific processes that must be addressed. For more information, review the Academy's practice tips that outline the regulations and implementation steps for obtaining ordering privileges (www.eatrightpro.org/dietorders/). For assistance, refer questions to the Academy's State Affiliate organization.

Medical staff oversight of an RDN(s) occurs in one of two ways. A hospital has the regulatory flexibility to appoint an RDN(s) to the medical staff and grant the RDN(s) specific nutrition ordering privileges, or can authorize the ordering privileges without appointment to the medical staff. To comply with regulatory requirements, an RDN's eligibility to be considered for ordering privileges must be through the hospital's medical staff rules, regulations, and bylaws, or other facility-specific process.[8] The actual privileges granted will be based on the RDN's knowledge, skills, experience, and specialist certification, if required, and demonstrated and documented competence.

The *Long-Term Care Final Rule* published October 4, 2016 in the *Federal Register*, "allows the attending physician to delegate to a qualified dietitian or other clinically qualified nutrition professional the task of prescribing a resident's diet, including a therapeutic diet, to the extent allowed by State law" and permitted by the facility's policies.[9] The qualified professional must be acting within the scope of practice as defined by state law; and is under the supervision of the physician that may include, for example, countersigning the orders written by the qualified dietitian or clinically qualified nutrition professional. RDNs who work in long-term care facilities should review the Academy's updates on CMS that outline the regulatory changes to §483.60 Food and Nutrition Services (www.eatrightpro.org/practice/quality-management/national-quality-accreditation-and-regulations/centers-for-medicare-and-medicaid-services). Review the state's long-term care regulations to identify potential barriers to implementation and identify considerations for developing the facility's process with the medical director and for orientation of attending physicians. The CMS State Operations Manual, Appendix PP-Guidance for Surveyors for Long-Term Care Facilities contains the revised regulatory language (new revisions are italicized and in red type).[10] CMS periodically revises the State Operations Manual Conditions of Participation; obtain the current information at www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/Downloads/som107Appendicestoc.pdf.

ACADEMY QUALITY AND PRACTICE RESOURCES

The Academy's Revised 2017 SOP in Nutrition Care and SOPP for RDNs[2] reflect the minimum competent level of nutrition and dietetics practice and professional performance. The core standards serve as blueprints for the development of focus area SOP and SOPP for RDNs in competent, proficient, and expert levels of practice. The SOP in Nutrition Care is composed of four standards consistent with the Nutrition Care Process and clinical workflow elements,[4] as applied to the care of patients/clients/populations in all settings.[11] The SOPP consist of standards representing the following six domains of professional performance: Quality in Practice, Competence and Accountability, Provision of Services, Application of Research, Communication and Application of Knowledge, and Utilization and Management of Resources. The SOP and SOPP for RDNs are designed to promote the provision of safe, effective, efficient, and quality food and nutrition care and services; facilitate evidence-based practice; and serve as a professional evaluation resource.

These focus area standards for RDNs in NIFM provide a guide for self-evaluation and expanding practice, a means of identifying areas for professional development, and a tool for demonstrating competence in delivering integrative and functional

medical nutrition therapy (IFMNT). *Integrative and functional medical nutrition therapy* is a term used to identify an application of medical nutrition therapy that incorporates both integrative and functional medicine principles and conventional (mainstream/Western) nutrition practices. The standards and indicators are used by RDNs to assess their current level of practice and to determine the education and training required to maintain currency in the focus area and advancement to a higher level of practice. In addition, they can be used to assist RDNs in general clinical practice with maintaining minimum competence in the focus area and by RDNs transitioning their knowledge and skills to a new focus area of practice. Like the Academy's core SOP in Nutrition Care and SOPP for RDNs,[2] the indicators (ie, measurable action statements that illustrate how each standard can be applied in practice) (see Figures 1 and 2, available at www.jandonline.org) for the SOP and SOPP for RDNs in NIFM were revised with input and consensus of content experts representing diverse practice and geographic perspectives. The SOP and SOPP for RDNs in NIFM were reviewed and approved by the Executive Committee of the DIFM DPG and the Academy Quality Management Committee.

THREE LEVELS OF PRACTICE

The Dreyfus model[18] identifies levels of proficiency (novice, advanced beginner, competent, proficient, and expert) (refer to Figure 3) during the acquisition and development of knowledge and skills. The first two levels are components of the required didactic education (novice) and supervised practice experience (advanced beginner) that precede credentialing for nutrition and dietetics practitioners. Upon successfully attaining the RDN credential, a practitioner enters professional practice at the competent level and manages his or her professional development to achieve individual professional goals. This model is helpful in understanding the levels of practice described in the SOP and SOPP for RDNs in NIFM.

With the growing interest in the NIFM focus area, RDNs may need to pursue knowledge of integrative and functional medicine principles (see Figure 4) for application to practice. The integrative and functional medicine principles can be incorporated across all settings (eg, acute, post-acute, and long-term care); populations (eg, socioeconomic groups); cultures (eg, ethnic, religious, organizational); and several areas of practice, including, but not limited to, community, clinical, consultation and business, research, education, and food and nutrition management.

In Academy focus areas, the three levels of practice are represented as competent, proficient, and expert.

Competent Practitioner

In nutrition and dietetics, a competent practitioner is an RDN who is either just starting practice after having obtained RDN registration by CDR or an experienced RDN recently transitioning his or her practice to a new focus area of nutrition and dietetics. A focus area of nutrition and dietetics practice is a defined area of practice that requires focused knowledge, skills, and experience that applies to all levels of practice.[19] A competent practitioner who has achieved credentialing as an RDN and is starting in professional employment consistently provides safe and reliable services by employing appropriate knowledge, skills, behavior, and values in accordance with accepted standards of the profession; acquires additional on-the-job skills; and engages in tailored continuing education to further enhance knowledge, skills, and judgment obtained in formal education.[19]

A suggested beginning foundation for a practitioner new to NIFM is to complete the Academy's Online Certificate of Training Program in Integrative & Functional Nutrition (modules 1 through 5), which was developed in collaboration with the DIFM DPG. This certificate of training program is a valuable training tool to acquire the needed background and understanding for competent-level practice (www.eatrightstore.org/cpe-opportunities/certificates-of-training). In addition, the DIFM DPG website (www.integrativeRD.org) provides resources, such as the Functional Nutrition Toolkit for professional advancement.

Proficient Practitioner

A proficient practitioner is an RDN who is generally 3 or more years beyond credentialing and entry into the profession and consistently provides safe and reliable service, has obtained operational job performance skills, and is successful in the RDN's chosen focus area of practice. The proficient practitioner demonstrates additional knowledge, skills, judgment, and experience in a focus area of nutrition and dietetics practice. An RDN may acquire specialist credentials, if available, to demonstrate proficiency in a focus area of practice.[19] A proficient practitioner has obtained training in NIFM, and may consider supplementary or additional training, such as the Institute for Functional Medicine Certified Practitioner (www.ifm.org/certification-membership/certification-program/), Dietetics and Integrative Medicine Graduate Certificate, or others listed in the Functional Nutrition Toolkit on the DIFM DPG website (www.integrativeRD.org).

With safety and **evidence-based practice**[19] as guiding factors when working with patients/clients, the RDN identifies the level of evidence, clearly states research limitations, provides safety information from reputable sources, and describes the risk of the intervention(s), when applicable.

The **DIFM Best Available Evidence Decision Tool** (Tool; https://integrativerdtool.org/) is an online, interactive practice tool that helps guide RDNs to evaluate the available scientific research and evidence that applies to making clinical decisions about nutrition care. The Tool assists RDNs in searching the literature and assessing the level of evidence to select the best available evidence to inform clinical recommendations. The Tool was funded by DIFM DPG and was developed by DIFM DPG's supported research fellow, expert RDNs in NIFM, and experts from the Academy's Research team.

In addition to the Tool, the Academy offers a webinar, *Evidence-Based Nutrition Using Scientific Evidence to Inform Clinical Practice* (www.eatrightstore.org/cpe-opportunities/recorded-webinars) that presents the five-step evidence-based process as a mechanism to acquire and critique evidence for practicing evidence-based nutrition care. RDNs in NIFM must evaluate and understand the best available evidence in order to converse authoritatively with medical providers and NIFM colleagues, and adequately involve the patient/client in the shared-decision making process.

Standards of Practice are authoritative statements that describe practice demonstrated through nutrition assessment, nutrition diagnosis (problem identification), nutrition intervention (planning, implementation), and outcomes monitoring and evaluation (four separate standards) and the responsibilities for which registered dietitian nutritionists (RDNs) are accountable. The Standards of Practice (SOP) for RDNs in Nutrition in Integrative and Functional Medicine (NIFM) presuppose that the RDN uses critical thinking skills; analytical abilities; theories; best-available research findings; current accepted nutrition, dietetics, and medical knowledge; and the systematic holistic approach of the nutrition care process as they relate to the application of the standards. Standards of Professional Performance (SOPP) for RDNs in NIFM are authoritative statements that describe behavior in the professional role, including activities related to Quality in Practice; Competence and Accountability; Provision of Services; Application of Research; Communication and Application of Knowledge; and Utilization and Management of Resources (six separate standards).

SOP and SOPP are evaluation resources with complementary sets of standards—both serve to describe the practice and professional performance of RDNs. All indicators may not be applicable to all RDNs' practice or to all practice settings and situations. RDNs operate within the directives of applicable federal and state laws and regulations, as well as policies and procedures established by the organization in which they are employed. To determine whether an activity is within the scope of practice of the RDN, the practitioner compares his or her knowledge, skill, experience, judgment, and demonstrated competence with the criteria necessary to perform the activity safely, ethically, legally, and appropriately. The Academy's Scope of Practice Decision Algorithm is specifically designed to assist practitioners with this process.

The term **patient/client** *is used in the SOP as a universal term as these Standards relate to direct provision of nutrition care and services. Patient/client could also mean client/patient, resident, participant, consumer, or any individual or group who receives integrative and functional medicine nutrition care and services.* **Customer** *is used in the SOPP as a universal term. Customer could also mean client/patient, client/patient/customer, participant, consumer, or any individual, group, or organization to which the RDN provides services. These services are provided to individuals of all ages. The SOP and SOPP are not limited to the clinical setting. In addition, it is recognized that the family and caregiver(s) of patient/clients of all ages, including individuals with special health care needs, play critical roles in overall health and are important members of the team throughout the assessment and intervention process. The term* **appropriate** *is used in the standards to mean: Selecting from a range of best practice or evidence-based possibilities, one or more of which would give an acceptable result in the circumstances.*

Each standard is equal in relevance and importance and includes a definition, a rationale statement, indicators, and examples of desired outcomes. A standard is a collection of specific outcome-focused statements against which a practitioner's performance can be assessed. The rationale statement describes the intent of the standard and defines its purpose and importance in greater detail. Indicators are measurable action statements that illustrate how each specific standard can be applied in practice. Indicators serve to identify the level of performance of competent practitioners and to encourage and recognize professional growth.

Standard definitions, rationale statements, core indicators, and examples of outcomes found in the Academy of Nutrition and Dietetics: Revised 2017 SOP in Nutrition Care and SOPP for RDNs have been adapted to reflect three levels of practice (competent, proficient and expert) for RDNs in NIFM (see image below). In addition, the core indicators have been expanded to reflect the unique competence expectations of the RDN in NIFM.

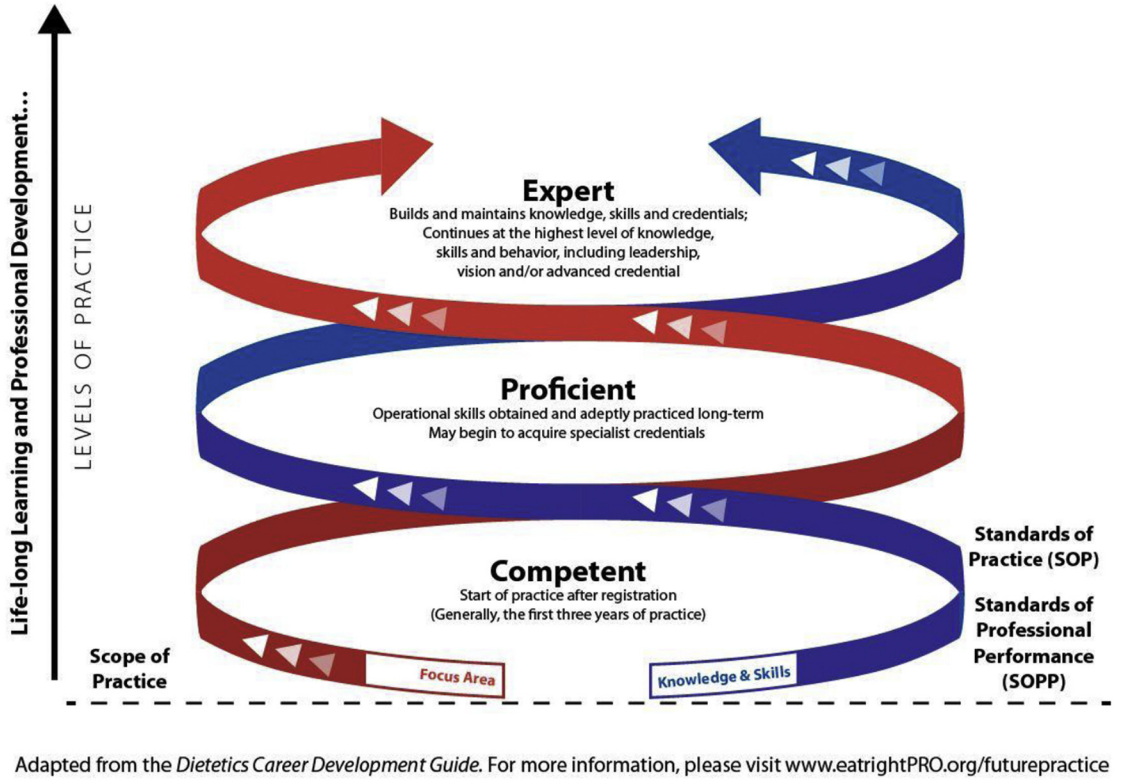

Figure 3. Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) (Competent, Proficient, and Expert) in Nutrition in Integrative and Functional Medicine.

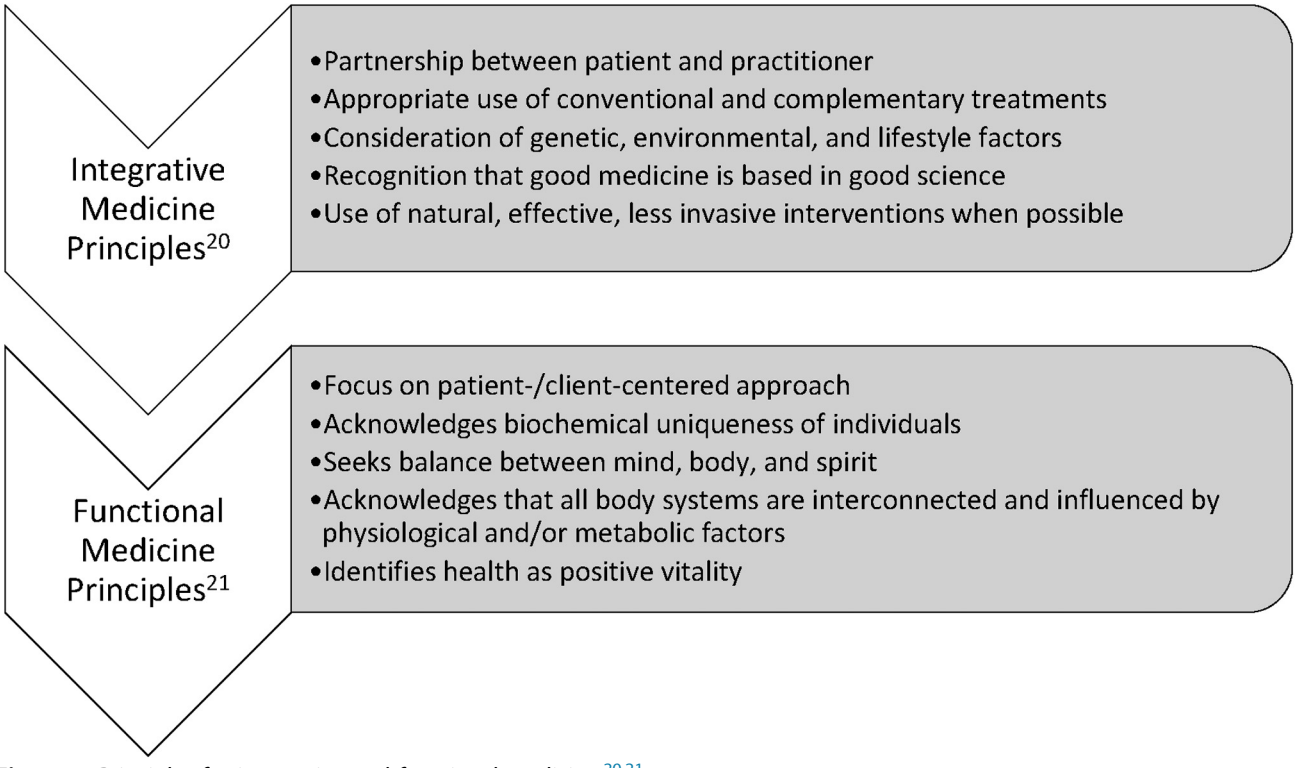

Figure 4. Principles for integrative and functional medicine.[20,21]

Expert Practitioner

An expert practitioner is an RDN who is recognized within the profession and has mastered the highest degree of skill in, and knowledge of, nutrition and dietetics. Expert-level achievement is acquired through ongoing critical evaluation of practice and feedback from others. The individual at this level strives for additional knowledge, experience, and training. An expert has the ability to quickly identify "what" is happening and "how" to approach the situation. Experts easily use nutrition and dietetics skills to become successful through demonstrating quality practice and leadership, and to consider new opportunities that build upon nutrition and dietetics.[19] An expert practitioner may have an expanded or specialist role, or both, and may possess an advanced degree or credential(s), such as the CDR Advanced Practitioner Certification in Clinical Nutrition. RDN experts in NIFM demonstrate depth and breadth of knowledge in nutritional biochemistry, genomics, environmental toxicology, and the microbiome. They are able to blend conventional medicine and nutrition principles with IFMNT to address the unique needs of individuals. Generally, the practice is more complex and the practitioner has a high degree of professional autonomy and responsibility. Refer to Figure 5 for additional descriptive information on the levels of practice for RDNs in NIFM.

These Standards, along with the Academy/CDR Code of Ethics,[3] answer the questions: Why is an RDN uniquely qualified to provide NIFM care and services? What knowledge, skills, and competencies does an RDN in NIFM need to demonstrate for the provision of safe, effective, and quality patient-/client-/population-centered care and service at the competent, proficient, and expert levels?

OVERVIEW

Refer to the alphabetical Glossary for definitions.

In the integrative and functional medicine paradigm, optimal health is "conceived as an integrated function of biology, environment, and behavior," and something other than the absence of disease.[22] Integrative and functional medicine's holistic approach, which considers genetics, beliefs, overall wellness, environmental and other factors that impact health and

Nutrition in Integrative and Functional Medicine: NIFM reflects both integrative and functional medicine, which encompass a patient-/client-centered, healing-oriented approach that embraces conventional and complementary therapies.[1] RDNs practicing NIFM provide nutrition care and services by performing a systems assessment (biological, clinical, and lifestyle) to develop a plan of care and evaluating physical, social, lifestyle, and environmental factors that influence interactions between the mind, body, and spirit.[12,13] NIFM encompasses *integrative and functional medical nutrition therapy*, a term used by the DIFM DPG to identify medical nutrition therapy that incorporates both integrative and functional medicine principles with conventional nutrition practices for chronic disease conditions and some acute conditions (eg, cancer, arthritis, cardiovascular, or neurodegenerative diseases). RDNs in NIFM may work in private practice, as part of an integrative and functional medicine health care team or practice, as faculty in nutrition and dietetics education programs, in research, and other settings.

RDNs in NIFM Practice Level Delineation and Recommended Education Resources		
Level of Practice Descriptions		
Competent RDN in NIFM	**Proficient RDN in NIFM**	**Expert RDN in NIFM**
NIFM competent-level practitioners focus on beginning learning of systems biology and applying concepts to practice with guidance from a mentor as needed.	NIFM proficient-level practitioners focus on expanding skills in nutrition assessment of root causes of disease symptoms, acute illnesses, or chronic medical conditions.	NIFM expert-level practitioners are recognized as leaders in NIFM practice; frequent speaker, or author on NIFM topics, and/or consultant or mentor to others in the health care community interested in the integration of conventional, traditional, and integrative and functional medicine.
Core NIFM Education, Training, and Credentialing		
Competent RDN in NIFM	**Proficient RDN in NIFM**	**Expert RDN in NIFM**
Competent: • Knowledge of systems biology • Knowledge of Integrative and Functional Medical Nutrition Therapy • 1 to 2 years clinical practice as an RDN • Completion of the Academy of Nutrition and Dietetics' [Academy's] Online Certificate of Training in Integrative and Functional Nutrition	Competent plus: • 3 years or more beyond credentialing and entry into the profession • At least 3 months additional training and/or mentoring with an expert NIFM RDN • Certificate of Training beyond competent level (see suggested training programs below) • 2 to 5 years NIFM-focused practice • Additional credentials and/or certifications (eg, Institute for Functional Medicine Certified Practitioner)	Proficient plus: • 5 to 10 years NIFM-focused practice • Maintain and expand current nutrition science knowledge with 50+ NIFM-related CPEUs[a] per 5-year period • Additional credentials and/or certifications (eg, CDR Advanced Practice Certification in Clinical Nutrition [RDN-AP])
Continuing Education and Resources Available on the Dietitians in Integrative and Functional Medicine Dietetic Practice Group (DIFM DPG) website (www.integrativeRD.org). Note: Some resources listed are only accessible to DIFM DPG members.		
Competent RDN in NIFM	**Proficient RDN in NIFM**	**Expert RDN in NIFM**
Competent: • Video: "What do Integrative and Functional Dietitians DO?" • DIFM Functional Nutrition Tool Kit, which contains resources such as *21st Century Medicine: A New Model for Medical Education and Practice* • *IntegrativeRD* newsletter (offers practice-related CPE[b] articles and other helpful information) • "Beginner (Novice/Beginner in IFM)" webinars • DIFM DPG Best Available Evidence Decision Tool	Competent plus: • "Intermediate (Competent/Proficient in IFM)" webinars • Publications such as, but not limited to: *Integrative Medicine: A Clinician's Journal*; *Alternative Therapies in Health and Medicine*; *Explore*; *Journal of Medicinal Food and Advances in Mind-Body Medicine*; *Nutrition and Metabolism*; *Journal of Translational Medicine* • NIFM practice-related webinars	Proficient plus: • "Advanced (Expert in IFM)" webinars • NIFM-related conferences and workshops • Food & Nutrition Conference & Expo (provided by the Academy) NIFM-related education sessions or workshops • Additional Academy and DPG Webinars (not provided by DIFM DPG)

Figure 5. Registered dietitian nutritionists (RDNs) in nutrition in integrative and functional medicine (NIFM) practice level delineation and recommended education resources. [a]CPEUs=Continuing Professional Education units. [b]CPE=Continuing Professional Education.

wellness, was initially driven by consumer demand.[23] It is an emerging area of practice that has become increasingly accepted by health care providers, institutions, and public health departments.[23-25] Integrative and functional medicine principles and concepts, such as patient-/client-centered care, shared decision making,[26] and functional laboratory testing,[27-29] if applicable, can be applied by RDNs across all focus areas and settings.

The functional medicine model was first proposed in the early 1980s by Jeffrey Bland, PhD, and was built on concepts presented by Galland,[30] Baker-MacDonald,[21] and Roger Williams.[31] A new paradigm of evidence-based nutrition needs to be established that sets criteria and guidelines.[32] The patient-centered approach considers the interplay between a person's genetic predispositions, microbiome,[33] environmental inputs, and lifestyle.[34,35] This interplay is recognized to give rise to core clinical imbalances[21,36,37] and dysfunction in the body's physiological systems and microbial ecosystem, including the significant influence that "long-latency nutritional insufficiencies"[38] have on the development of chronic disease.[39] Nutritional insufficiencies underscore the importance of having available nutrients critical to cellular metabolism. An observation about the nutritional status of individuals and populations is the significant nutrition transition[40] that has occurred in the last century. The nutrition transition is theorized to be associated with the rise in the epidemic of chronic disease and obesity.[41] The evidence and associations with nutritional insufficiencies and chronic disease bring the importance of nutritional guidance and therapy to the forefront.

Patient-/client-centered care is a major tenet of the integrative and functional medicine paradigm. It is defined as care provided by the health care practitioner that is respectful, emotionally supportive, responsive to individual patient/client preferences, needs, beliefs, and values; and that mindfully communicates to the patient/client their diagnostic data based on clinical and biochemical evidence.[42] The intent is for the patient/client to have information needed to guide clinical decisions when provided options for therapeutic interventions that are evidence-based,[26] as well as those with limited evidence.[43] Thus, RDNs devote ample time to nurture and guide patient-/client-centered care using the Nutrition Care Process, which closely aligns with the interactional nature of the patient/client and RDN relationship in the shared decision-making process.[26]

The experience of the RDN when combined with information obtained from the patient/client (eg, barriers—financial or food insecurity, negative relationships, facilitators—family support) can provide a platform for patient-/client-centered care outcomes research.[44] Patient/client information can complement existing evidence-based research and lead to the development of evidence-based patient/client decision aid tools. This additionally increases RDN confidence in assessing and making appropriate recommendations in situations marked by a high degree of uncertainty. The Academy's Health Informatics Infrastructure,[45] with the embedded electronic Nutrition Care Process Terminology can provide the framework[46] to enable RDNs to track patient outcomes data. The NIFM paradigm focuses on preventive and intervention-based care of the individual and attempts to address the root cause of the disease or dysfunction. The RDN in NIFM gathers The Patient's Story[21,47,48] and uses information from "omic" sciences (eg, genomics, proteomics, and metabolomics),[49,50] environmental toxicology,[12,51] and microbiome-based research to inform the assessment. The Patient's Story information contributes to the RDN's capacity to provide patient-/client-centered, personalized assessment and care unique to the individual experience. Using The Patient's Story and medical history can complement and build on population-level evidence, which, in tandem, facilitates an understanding and conceptualization of the parameters of assessment/intervention safety and effectiveness.

The RDN Practicing NIFM

The RDN in NIFM provides consultation to patients/clients, who range across the lifespan, seeking optimal health, wellness, and prevention of chronic disease. Training includes attention to healing and considers the patient's/client's beliefs, attitudes, lifestyle, motivations, as well as physical, mental, and emotional aspects. The patient/client and RDN relationship prioritizes the care of the whole person. From the data gathered, the RDN identifies root nutritional and lifestyle causes of imbalance, prioritizes the intervention(s), and uses appropriate therapeutic approaches in a complementary manner.[52] This approach facilitates support of the patient's/client's well-being and the effective long-term management of chronic disease.[53]

A detailed interview upon the patient's consent to NIFM care and/or services begins by hearing The Patient's Story,[21,47,48] documenting medical and health history throughout their lifespan (ie, in utero to present) that influences their current state of health, and identifying core imbalances in metabolism. An example of a tool for documenting the patient's history would be the Functional Medicine Timeline.[22] RDNs in NIFM appreciate that individuals have unique metabolic patterns based on the interplay between genetics and the environment. Providers of integrative and functional medicine propose that minor imbalances within the body can produce a cascade of long-latency biochemical responses that can eventually lead to poor health, acute conditions, and chronic illness.[39] Many RDNs currently use approaches that complement the evidence-based, conventional medicine model.[54,55] RDNs in NIFM use interventions in holistic health care that may have their origin in traditional medicine, such as yoga, qigong, Ayurveda, chiropractic, naturopathy, movement, and meditation.[52]

The Institute for Functional Medicine was the first to propose an organized tool, the Functional Medicine Matrix (Matrix) (Figure 6),[22] which practitioners can use in assessment and interaction with patients/clients. The Matrix serves as a practical framework for capturing the patient's/client's health concerns, as well as organizing the complexity of chronic disease. The Patient's Story encompasses information on antecedents (preceding events), triggers (precipitates an event), and mediators (promotes a reaction)[22]; core physiological imbalances; and

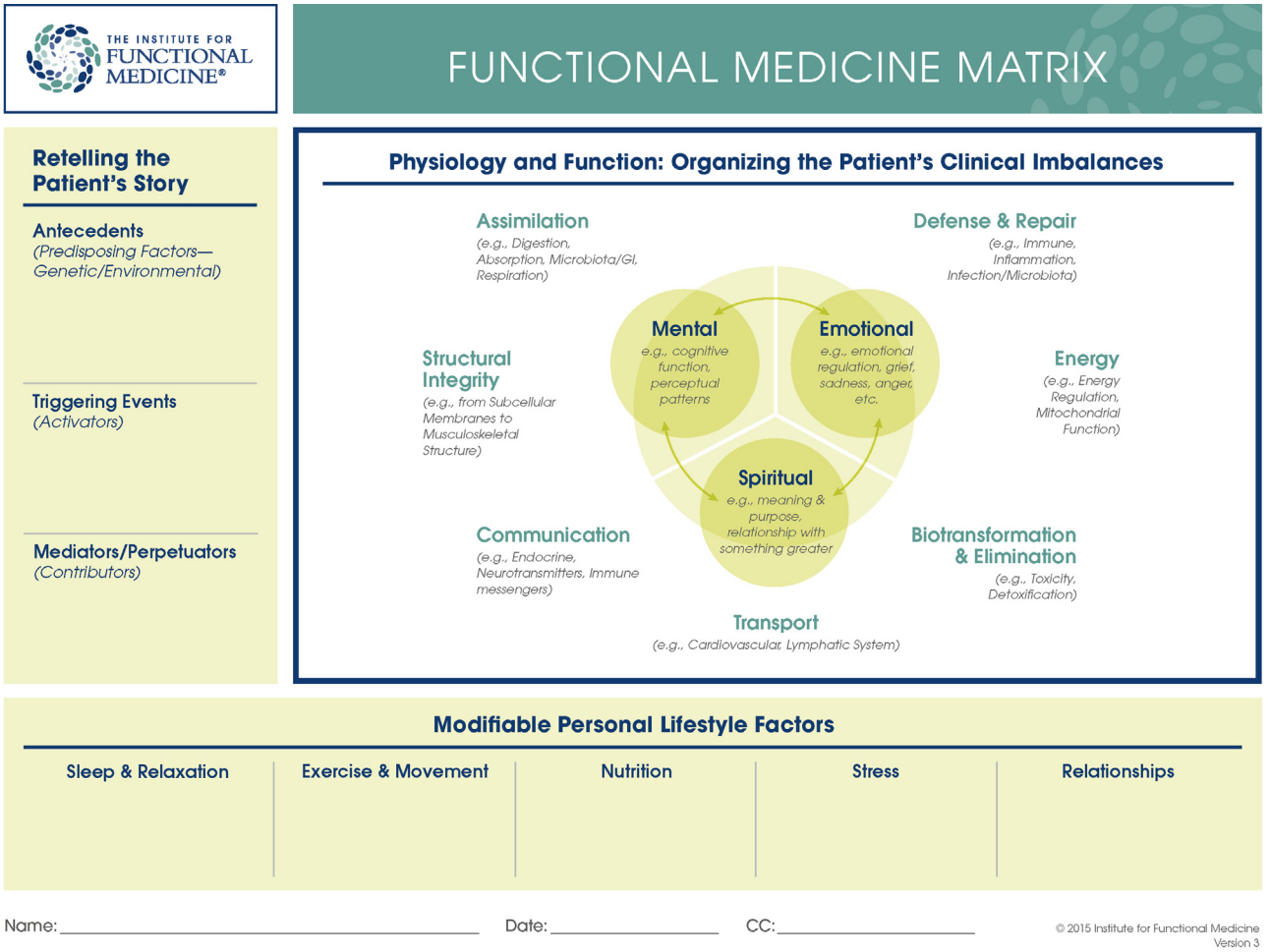

Figure 6. Functional medicine matrix. (Functional Medicine Matrix © 2015 The Institute for Functional Medicine. Used with permission granted by The Institute for Functional Medicine, www.ifm.org. No part of this content may be reproduced or transmitted in any form or by any means without the express written consent of The Institute for Functional Medicine, except as permitted by applicable law.[22])

potential diet and lifestyle factors that all develop and perpetuate chronic disease. This approach allows practitioners to address multiple dimensions involved in health promotion and disease prevention by honoring the mind–body–spirit[56] uniqueness of the individual.

Ample time is devoted to gathering The Patient's Story through a detailed lifestyle assessment using available tools, such as the IFMNT Radial,[57] a comprehensive patient questionnaire, nutrition-focused physical examination,[58,59] conventional and functional laboratory[27-29] and diagnostic findings,[27] including nutrigenomic data to identify genetically unique clinical imbalances and medical nutrition therapy. The RDN then presents available evidence-based options and employs techniques such as motivational interviewing to elicit the patient's/client's readiness for change and any patient-experienced ambivalence to change. Using a patient-/client-centered approach that closely aligns with the shared decision-making process,[26] patient engagement and empowerment are fostered. The etiology of each medical condition can be driven by multiple causes (ie, different mechanisms, metabolic perturbations, clinical imbalances, and genotype). The assessment and diagnosis of what cause(s) contributes to an individual's unique physiological imbalances becomes a tenet of NIFM.

The IFMNT Radial (Figure 7)[57] was created in 2011 and updated in 2018 by three expert RDN practitioners, Kathie Swift, Diana Noland, and Elizabeth Redmond, as a conceptual framework to assist RDNs in implementing IFMNT in practice. The circular architecture of the Radial depicts a patient-/client-centered process surrounded by community, body, earth (eg, agriculture production, health of soil), mind, and spirit, and allows for the evaluation of complex interactions and interrelationships using the Nutrition Care Process. The five key areas of IFMNT are represented in the circular patient-/client-centered process: food, lifestyle, and environment (eg, food security, culture and traditions, exercise, or movement); systems (ie, systems biology); nutrition, physical signs and symptoms; metabolic pathways and networks; and biomarkers.[60,61] Food is considered a key determining factor in health and disease, as it contains the messages of biological information that influence the key areas of IFMNT. All areas are interconnected

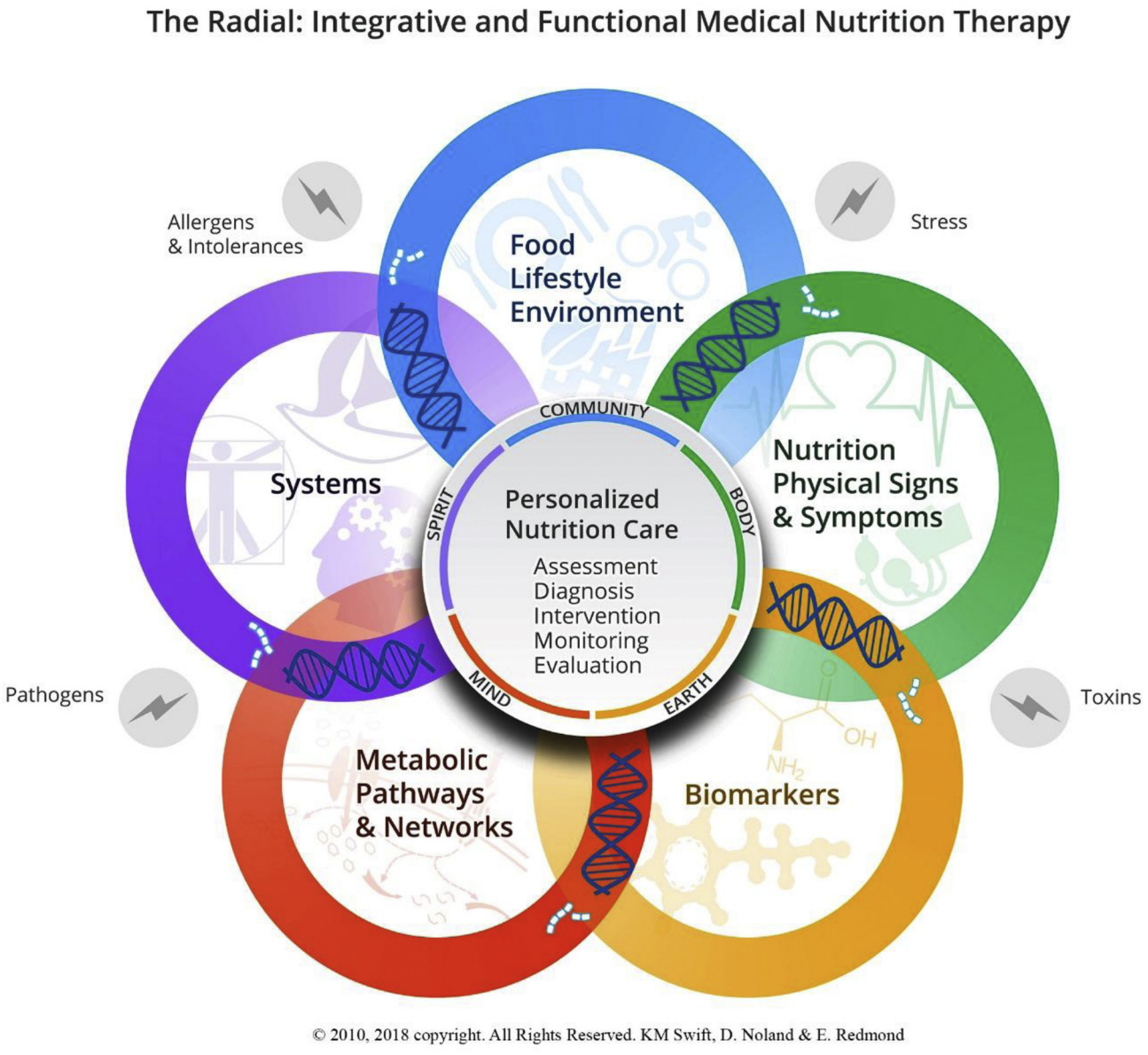

Figure 7. Integrative and functional medical nutrition therapy radial. (Reprinted with permission from Kathie M. Swift, MS, RDN, LDN, FAND; Diana Noland, MPH, RD; and Elizabeth Redmond, PhD, MMSc, RD, LD.)

and influenced by a person's biochemical and genetic uniqueness, illustrated by the DNA and microbiota strands linking the five key areas. Precipitating factors, such as allergens and intolerances, stress, pathogens, and toxins (metabolic and environmental exposures),[62] exist along the Radial's periphery. These potential antagonists can adversely affect an individual's metabolism, resulting in imbalances and malnutrition.

Complementary medical practices for consideration include approaches that are not usually part of conventional care. Examples include functional laboratory testing[27]; functional foods[63,64]; nutrigenomics[65]; acupuncture; herbal/botanical medicine; meditative movement therapies; therapeutic food elimination diets; dietary supplements,[66] including vitamins, minerals, phytonutrients, and botanicals[19]; gastrointestinal and microbiome-based interventions; and support for biotransformation and elimination of toxins.[21,36,56,67-69] The extent to which these approaches are used is based on training and/or collaboration with experienced interprofessional team members which includes conventional and complementary practitioners. Restoring optimal function and promoting wellness and vitality is the ultimate goal in an IFMNT care plan.

Additional Practice Development

During the last 30 years, a number of institutions and organizations, including the Academy's DIFM DPG, have been leading this focus area with the education of health care practitioners on the importance of nutrition

in optimizing metabolism. A few examples of NIFM education opportunities for RDNs are: the Center for Mind Body Medicine's Food as Medicine program; the Arizona Center for Integrative Medicine's[70] online courses, conferences, and publications; and The Institute for Functional Medicine's[37] educational programs and publications in functional medicine and nutrition (see DIFM DPG Functional Nutrition Toolkit at www.integrativerd.org).

DIFM DPG

The Academy's DIFM DPG[71] is advancing their members' application of knowledge in NIFM, blending conventional and complementary therapies that represent a broader paradigm of medical nutrition therapy and the Nutrition Care Process and workflow elements. The DIFM DPG, formerly known as the Nutrition in Complementary Care DPG, was originally established in 1998 by a group of RDNs interested in broadening their skill sets in topics, such as nutritional genomics,[49,50,72] functional foods,[63,64] dietary supplements,[19] applied nutritional biochemistry,[73] and ancient traditions, such as Ayurveda.[52,74] The vision of the DIFM DPG is to optimize health and healing through integrative and functional nutrition practices. The long-range mission is to empower members to be leaders, mentors, educators, and collaborative partners in integrative and functional nutrition therapies (DIFM DPG strategic plan is available at https://integrativerd.org/strategic-plan/). The DIFM DPG website (www.IntegrativeRD.org) provides descriptions of networks and partnerships that allow DIFM DPG members access to valuable educational opportunities, including reduced fees for professional conferences, webinars, newsletters, and online courses.

ACADEMY REVISED 2019 SOP AND SOPP FOR RDNs (COMPETENT, PROFICIENT, AND EXPERT) IN NIFM

An RDN can use the Academy: Revised 2019 SOP and SOPP for RDNs (Competent, Proficient, and Expert) in NIFM (see Figures 1 and 2, available at www.jandonline.org, and Figure 3) to:

- identify the competencies that are needed to provide NIFM care and services;
- self-evaluate whether he or she has the appropriate knowledge, skills, experience, and judgment to provide safe, effective, and quality NIFM care and service for their level of practice;
- identify the areas in which additional knowledge, skills, and experience are needed to practice at the competent, proficient, or expert level of NIFM practice;
- provide a foundation for public and professional accountability in NIFM care and service;
- support efforts for strategic planning, performance improvement, outcomes reporting, and assist management in the planning and communicating of NIFM services and resources;
- enhance professional identity and skill in communicating the nature of NIFM care and services;
- guide the development of NIFM-related education and continuing education programs, job descriptions, practice guidelines, protocols, clinical models, competence evaluation tools, and career pathways; and
- assist educators and preceptors in teaching students and interns the knowledge, skills, and competencies needed to work in NIFM, and the understanding of the full scope of this focus area of practice.

APPLICATION TO PRACTICE

All RDNs, even those with significant experience in other practice areas, must begin at the competent level when practicing in a new setting or new focus area of practice. At the competent level, an RDN in NIFM practice is learning the principles of systems biology[75-78] that underpin this focus area and is developing knowledge, skills, and judgment, and gaining experience for safe and effective patient/client/population-centered NIFM practice. This RDN, who may be new to the profession or may be an experienced RDN, has a breadth of knowledge in nutrition and dietetics and may have proficient or expert knowledge/practice in another focus area. However, the RDN new to this focus area of NIFM will be challenged in becoming familiar with the new paradigm of systems biology and the body of scientific knowledge, evidence-based research, the concept and role of The Patient's Story, and available resources to support and ensure quality NIFM practice.[79,80] Education efforts in these topics were summarized by Augustine and colleagues in 2016[81] as occurring across several national health professional associations.

At the proficient level, an RDN has developed a deeper understanding of NIFM practice and is better equipped to adapt and apply evidence-based guidelines and best practices than at the competent level. This RDN is able to modify practice according to unique situations. The RDN at the proficient level may possess a specialist or advanced credential(s) recognized within NIFM (eg, Institute for Functional Medicine Certified Practitioner).

At the expert level, the RDN thinks critically about NIFM; demonstrates a more intuitive understanding of the practice area; displays a range of highly developed clinical and technical skills; and formulates judgments acquired through a combination of education, counseling techniques, and experience. Essentially, practice at the expert level requires the application of nutrition, biochemistry, nutritional genomics, and dietetics knowledge, with practitioners drawing not only on their practice expertise, but also on the experience of RDNs in NIFM in various disciplines and practice settings. RDNs at the expert level see the significance and meaning within a contextual whole, are fluid and flexible, and have considerable autonomy in practice. They not only develop and implement NIFM care and services, they also manage, drive, and direct clinical care; conduct and collaborate in research; participate in advocacy; accept organization leadership roles; engage in scholarly work; guide interprofessional teams; and are leaders in the advancement of NIFM practice.

Indicators for the SOP and SOPP for RDNs in NIFM are measurable action statements that illustrate how each standard can be applied in practice (Figures 1 and 2, available at www.jandonline.org). Within the SOP and SOPP for RDNs in NIFM, an "X" in the competent column indicates that an

RDN who is caring for patients/clients is expected to complete this activity and/or seek assistance to learn how to perform at the level of the standard. A competent RDN desiring to provide IFMNT to patients/clients could be an RDN starting practice after registration who has obtained basic training in NIFM, or an experienced RDN who has recently sought training to provide NIFM care for patients/clients, as described in Figure 5.

An "X" in the proficient column indicates that an RDN who performs at this level has a deeper understanding of IFMNT and the ability to modify or guide therapy to meet the needs of patients/clients throughout the lifespan, with chronic diseases, in clinic or through telehealth practices, and public health outreach.

An "X" in the expert column indicates that the RDN who performs at this level possesses a comprehensive understanding of NIFM with a highly developed range of skills and judgments acquired through a combination of experience and education in NIFM, genomics, nutritional biochemistry, functional laboratory testing, theories of long latency nutritional insufficiencies,[38] systems biology, nutrition modulated interventions for elimination of environmental exposures, microbiome-based therapies, and other integrative and functional medicine areas.[52] The expert RDN builds and maintains the highest level of knowledge, skills, and behaviors, including leadership, vision, and credentials (see Figure 5).

Standards and indicators presented in Figure 1 and Figure 2 (available at www.jandonline.org) in boldface type originate from the Academy's Revised 2017 SOP in Nutrition Care and SOPP for RDNs[2] and should apply to RDNs in all three levels. Additional indicators not in boldface type developed for this focus area are identified as applicable to all levels of practice. Where an "X" is placed in all three levels of practice, it is understood that all RDNs in NIFM are accountable for practice within each of these indicators. However, the depth with which an RDN performs each activity will increase as the individual moves beyond the competent level. Several levels of practice are considered in this document; thus, taking a holistic view of the SOP and SOPP for RDNs in NFIM is warranted. It is the totality of individual practice that defines a practitioner's level of practice and not any one indicator or standard.

RDNs should review the SOP and SOPP in NIFM at determined intervals to evaluate their individual focus area knowledge, skill, and competence. Consistent self-evaluation is important because it helps identify opportunities to improve and enhance practice and professional performance and set goals for professional development. This self-appraisal also enables RDNs in NIFM to better utilize these Standards as part of the *Professional Development Portfolio* recertification process,[82] which encourages CDR-credentialed nutrition and dietetics practitioners to incorporate self-reflection and learning needs assessment for development of a learning plan for improvement and commitment to lifelong learning. CDR's updated system implemented with the 5-year recertification cycle that began in 2015 incorporates the use of essential practice competencies for determining professional development needs.[83] In the new three-step process, the credentialed practitioners access an online Goal Wizard (step 1), which uses a decision algorithm to identify essential practice competency goals and performance indicators relevant to the RDN's area(s) of practice (essential practice competencies and performance indicators replace the learning need codes of the previous process). The Activity Log (step 2) is used to log and document continuing professional education for the 5-year period. The Professional Development Evaluation (step 3) guides self-reflection, assessment of learning, and its application. The outcome is a completed evaluation of the effectiveness of the practitioner's learning plan and continuing professional education. The self-assessment information can then be used in developing the plan for the practitioner's next 5-year recertification cycle. For more information, see www.cdrnet.org/competencies-for-practitioners.

RDNs are encouraged to pursue additional knowledge, skills, and training, regardless of practice setting, to maintain currency and to expand individual scope of practice within the limitations of the legal scope of practice, as defined by state law. RDNs are expected to practice only at the level at which they are competent, and this will vary depending on education, training, and experience.[84] RDNs are encouraged to pursue additional knowledge and skill training, and collaboration with other RDNs and/or interprofessional team members in integrative and functional medicine to promote consistency in practice and performance and continuous quality improvement.[85] See Figure 8 for examples of how RDNs in different roles, at different levels of practice, can use the SOP and SOPP in NIFM.

In some instances, components of the SOP and SOPP for RDNs in NIFM do not specifically differentiate between proficient-level and expert-level practice. In these areas, it remains the consensus of the content experts that the distinctions are subtle, captured in the knowledge, experience, and intuition demonstrated in the context of practice at the expert level, which combines dimensions of understanding, performance, and value as an integrated whole.[86] A wealth of knowledge is embedded in the experience, discernment, and practice of expert-level RDN practitioners. The experienced practitioner observes events, analyzes them to make new connections between events and ideas, and produces a synthesized whole. The knowledge and skills acquired through practice will continually expand and mature. The SOP and SOPP indicators are refined with each review of these Standards as expert-level RDNs systematically record and document their experiences, often through use of exemplars. Exemplary actions of individual RDNs in NIFM practice settings, as well as professional activities that enhance patient/client/population care and/or services, can be used to illustrate outstanding practice models, such as collaboration on a graduate-level interprofessional curriculum for training RDNs in nutrition and dietetics and integrative and functional medicine. [53]

FUTURE DIRECTIONS

The SOP and SOPP for RDNs in NIFM are innovative and dynamic documents. Future revisions will reflect emerging science, advances in practice, updates to nutrition and dietetics education standards, regulatory changes, and outcomes of practice audits. Continued clarity and differentiation of

Role	Examples of use of SOP and SOPP documents by RDNs in different practice roles[a]
Clinical practitioner in ambulatory care, private practice, medical group	An RDN working in an outpatient clinic with a chronic disease patient population is observing conditions such as food sensitivities and intolerances, metabolic syndrome, and autoimmune and neurodegenerative disorders. After discussions with colleagues and recent journal articles describing the potential benefit of integrative and functional medicine approaches, the RDN is interested in incorporating dietary and lifestyle modifications. To gain more knowledge and experience with these diagnoses, the RDN reviews available medical, integrative and functional medicine, and medical nutrition therapy resources to identify knowledge and skills for continuing education. The RDN also refers to the SOP and SOPP in Nutrition in Integrative and Functional Medicine (NIFM) to learn about NIFM approaches to the diagnoses and to evaluate expected outcomes and the level of competence needed to incorporate NIFM into the care of these individuals. While developing NIFM expertise, the RDN builds a network of mentors and colleagues for interprofessional team referrals for individuals who require a level of care higher than the RDN can competently provide.
Food and/or dietary supplement industry consultant or employee	An RDN serving as a consultant or employee of a food or dietary supplement company adopting NIFM therapy principles uses the SOP and SOPP in NIFM to identify resources to guide the application of NIFM in the development of evidenced-based products or educational materials produced by the company. The RDN also identifies the desired performance indicators from the competencies and appropriate learning activities to achieve and enhance knowledge, skills, and competence to support roles and responsibilities.
Long-term care/skilled nursing facility	An RDN working in a long-term care and skilled nursing facility managing the nutrition needs of the elder population is monitoring several chronically ill residents with persistent weight loss, frequent infections, and non-healing pressure ulcers/injuries without improvement. The RDN is interested in investigating NIFM approaches and refers to the SOP and SOPP in NIFM for information in evaluating the level of competence needed to provide quality integrative and functional medical nutrition therapy interventions to these residents. The SOP and SOPP provides guidance to increase knowledge and identify resources for building skills in assessing underlying core clinical imbalances that may relate to potential nutrient imbalances. The RDN contacts a colleague with an NIFM practice for mentoring, resource ideas, and continuing education programs.
Researcher	An RDN working in a research setting is awarded a grant to demonstrate the impact of NIFM care and services provided by trained NIFM RDNs on health outcomes. The RDN consults with proficient- and expert-level NIFM practitioners in designing the research protocol. The RDN uses the SOP and SOPP in NIFM as a resource for identifying areas for staff development and/or collaboration with a colleague more experienced in NIFM research.
Telehealth practitioner	An RDN working in a telehealth setting receives requests to provide nutrition consultations and health and wellness coaching[19] to clients with various medical conditions interested in NIFM therapies. The RDN reviews the SOP and SOPP in NIFM to determine competencies needed to address the client questions, provide recommendations, and identify resources and areas for continuing education. The RDN monitors relevant state laws and regulations governing telehealth practice as well as the Academy of Nutrition and Dietetics telehealth resources (www.eatrightpro.org/telehealth), particularly for out-of-state consults, to keep current. The RDN reviews the SOP and SOPP in NIFM and seeks out an RDN experienced in NIFM for mentoring and guidance regarding continuing education activities and client resources (eg, evidence-based websites, list of local Integrative and Functional Medicine practitioners/clinics).
Nutrition and dietetics university faculty or preceptor	An RDN serving as a faculty member or a preceptor developing a supervised practice rotation in NIFM for an accredited nutrition and dietetics education program uses the SOP and SOPP in NIFM to identify desired competencies in NIFM for students/interns. The RDN uses the SOP and SOPP resources to develop ideas for appropriate learning activities in achieving these competencies (eg, readings, class lectures, written assignments, clinical practicum experiences, case studies, presentations, and/or discussions with NIFM practitioners).

[a]For each role, the RDN updates the professional development plan to include applicable essential practice competencies for integrative and functional medicine nutrition care and services.

Figure 8. Role examples of Standards of Practice (SOP) and Standards of Professional Performance (SOPP) for Registered Dietitian Nutritionists (RDNs) (Competent, Proficient, and Expert) in Nutrition in Integrative and Functional Medicine.

NUTRITION IN INTEGRATIVE AND FUNCTIONAL MEDICINE GLOSSARY

Ayurveda: A system of traditional medicine from India that aims for the knowledge for a long life. Ayurveda promotes a balance of the three bodily humors, or *doshas*, called *vata*, *pitta*, and *kapha*. It is generally practiced as complementary to conventional medicine. Ayurveda emphasizes good health and prevention and treatment of illness through lifestyle practices (such as massage, meditation, yoga, and dietary changes) and the use of herbal remedies.[74]

Biochemical Individuality: Refers to the unique nutritional, lifestyle, and metabolic needs of each individual based on genetic makeup, lifestyle, and environmental factors.[89-91]

Biomarkers: Refers to "a characteristic that is objectively measured and evaluated as an indicator of normal biological processes, pathogenic processes, or pharmacologic responses to a therapeutic intervention."[60] "Biomarkers are any substance, structure or process that can be measured in the body or its products and influence or predict the incidence of outcomes or disease."[61]

Biotransformation and Elimination (eg, Detoxification): Are integral to the liver and cellular detoxification system. The process involves a highly complex, biphasic process (phase 1 and phase 2) comprised of enzymes, nutrient cofactors, and transporters. Phase 1 involves modification of toxins and metabolites to be excreted using the cytochrome P450 group of enzyme reactions (eg, oxidation, reduction, or hydrolysis) producing intermediary metabolites that become reactive oxidation species requiring further transformation by the phase 2 enzyme conjugation reactions before excretion via feces, urine, breath, and skin.[21,36,56,67-69]

Cellular Respiration: The cellular metabolic processes that convert biochemical energy derived from nutrients into the molecule adenosine triphosphate are one of the key ways cells release chemical energy to fuel cellular activity while also releasing metabolic waste products. Each conversion step is dependent on nutrient cofactors.[92]

Chronic Disease: "A culmination of a series of pathogenic processes in response to internal and/or external stimuli over time that results in a clinical diagnosis/ailment and health outcomes."[39] Current science is recognizing biomarkers of early development of chronic disease pathophysiology when an individual is asymptomatic that can benefit from the implementation of nutritional and lifestyle interventions to promote a more positive clinical outcome.[39]

Core Clinical Imbalances: Systemic imbalances related to dysfunctional physiological and metabolic systems within the body caused by a combination of nutritional, nutrigenomic, and/or environmental factors (eg, diet, toxicants, pathogens, allergens, stress, lifestyle, and trauma). Examples of core clinical imbalances include structural integrity, cellular communication, assimilation, biotransformation and elimination, energy metabolism, inflammation/oxidative stress, neuro-endocrine-immune, and nutritional status.[21,36,37]

Dietary Supplements: Refer to Academy Definition of Terms List at www.eatrightpro.org/scope, which cites the US Food and Drug Administration.

Energy Metabolism: Series of interconnected metabolic pathways (the citric acid cycle and oxidative phosphorylation) that generate energy molecules (adenosine triphosphate) from nutrients. The nutritionally generated adenosine triphosphate can be fueled by glucose (glycolysis), non-carbohydrate carbon precursors (gluconeogenesis), or fat (ketosis). The biochemical reactions can occur in the presence or absence of oxygen. Beyond the cellular production of energy, altered energy metabolism may result in unhealthy changes to the phenotype (eg, obesity, sarcopenia), and are largely affected by environmental, lifestyle, diet, and genetic influences on an individual over the lifespan.[92]

Environmental Toxicology: The study of chemical molecules or environmental toxins acquired from the environment (eg, food, air, water, soil) capable of producing adverse effects on the human body. Environmental toxins can have adverse effects on food quality, inhibit metabolic and physiological pathways, nutrient function, absorption and utilization, damage DNA, and deplete nutrients required for biotransformation.[12,51]

Epigenetics: "DNA modifications that do not change the DNA sequence can affect gene activity. Chemical compounds that are added to single genes can modify and regulate their activity; these modifications are known as epigenetic changes. The epigenome comprises all of the chemical compounds that have been added to the entirety of one's DNA (genome) as a way to regulate the activity (expression) of all the genes within the genome. The chemical compounds of the epigenome are not part of the DNA sequence, but are on or attached to the DNA ("epi-" means above in Greek). Epigenetic modifications remain as cells divide and in some cases can be inherited through the generations. Environmental influences, such as a person's diet and exposure to pollutants, can also impact the epigenome."[93]

Functional Foods: "Foods and food components that provide a health benefit beyond basic nutrition (for the intended population). Examples may include conventional foods; fortified, enriched or enhanced foods; and dietary supplements. These substances provide essential nutrients often beyond quantities necessary for normal maintenance, growth, and development, and/or other biologically active components that impart health benefits or desirable physiological effects."[63,64]

Functional Laboratory Data: Data may be conventional clinical tests or procedures such as blood tests, imaging, microbiology which are evaluated using a functional lens.[27-29] Biomarkers of nutritional and metabolic status using biomedical, nutrient, pathology, physical examination, microbial, and/or hormonal tests are interpreted using functional or holistic perspectives.

(continued on next page)

Genomic Testing: "A type of medical test that identifies changes in chromosomes, genes, or proteins."[94] The genetic testing of most interest to the field of nutrigenomics is DNA microarray technology and quantitative real-time polymerase chain reaction that successfully evaluate the interactions between diet and genes measured as epigenetic changes in single nucleotide polymorphisms (SNPs) genetic expression. A number of relatively common SNPs (defined in glossary below) are known to influence nutrient requirements. Increasing in popularity are direct-to-consumer saliva tests and a growing number of professional genetic testing laboratories.[95-97]

Long Latency Nutritional Insufficiencies and Deficiencies: A theory that postulates long-term nutrient inadequacies/insufficiencies and/or micronutrient deficiencies can accelerate molecular aging, including DNA damage, and mitochondrial decay, which may contribute to the development of major chronic diseases.[38]

Methylation: Denotes the addition of a methyl group (CH_3). In biological systems, methylation is a critical process in metabolism. It is also involved in gene expression, as well as modification of heavy metals and RNA metabolism.[98,99]

Mitochondriopathies: Refers to mitochondrial abnormalities that can either be inherited maternally or develop from spontaneous mutations, where the mitochondria is physically or functionally altered. Mitochondriopathies are found in most chronic diseases, especially neurodegenerative diseases and common age-related diseases, such as Alzheimer's or Parkinson's disease. Mitochondrial membrane structure and function can be altered in an individual by nutrient imbalances, environmental, lifestyle, diet, and genetic influences.[100,101]

Nutritional Biochemistry: Nutritional biochemistry uses physiology, medicine, microbiology, pharmacology, chemistry, biology, and genomic influences to apply to the study of and connections between health, diet, nutrition, disease, and drug treatments.[73]

Nutritional Genomics: "The broad term encompassing nutrigenetics, nutrigenomics, and nutritional epigenomics, all of which involve interactions between nutrients and genes, the expression to reveal phenotypic outcomes, including disease risk."[49] It focuses on the effect of genes on the risk of diseases and dysfunction that may be eased by nutrition intervention in addition to the impact food, nutrition, stress, and toxins have on the epigenetic expression in genes resulting in changes to physiology.[50,65]

Nutrition Transition: Describes the global alterations in dietary patterns, body composition, and physical activity patterns, with a special emphasis on emerging economies that are experiencing accelerated and simultaneous urbanization, socioeconomic, and acculturative changes. The health outcomes are referred to as the double burden of disease, where nutritional insufficiencies occur concomitantly with chronic diseases in the same population, family, and sometimes within the same individual. Transitory changes are fueled by: a combination of global agricultural policies and practices that promote the displacement of traditional diets of whole foods with foods higher in sugars, fats, plastic, sodium, and environmental residuals, and reduced vegetable and fruit intake; and the inability of existing health care systems to address these challenges adequately and efficiently.[40]

Organic Acids: Products of metabolism that can sensitively identify nutrient deficiencies and core clinical imbalances that lead to metabolic roadblocks. Traditionally they were used for detection of neonatal inborn errors of metabolism, including mitochondrial disorders (eg, a deficiency of vitamin B-12 produces high levels of a urinary organic acid called methylmalonic acid). Other organic acids can be indicative of deficiencies of many nutrients (eg, vitamin B-1, vitamin B-6, folic acid, magnesium), and other metabolic networks.[56,102]

Phthalates: Industrial chemicals that are added to plastics to impart flexibility and resilience. Health effects from phthalates at low environmental doses or at biomonitored levels from low environmental exposures are unknown. Dietary sources have been considered as the major exposure route.[103]

Single Nucleotide Polymorphisms (SNPs): DNA sequence variations that occur when a single nucleotide (A, T, C, or G) in the genome sequence is altered. SNPs are the most common type of genetic variation among people and their biochemical genomic uniqueness. SNPs "may help predict influences on an individual's nutrient requirements, response to certain drugs, susceptibility to environmental factors such as toxins, and risk of developing particular diseases. SNPs can also be used to track the inheritance of disease genes within families."[104]

Steroidogenesis: Process by which cholesterol is converted biologically to steroid hormones that are secreted from all endocrine glands, including adrenals, thyroid, parathyroid, gonads, pituitary, and hippocampus as they "dance together" each effecting the function of the other. Comprehension of steroidogenesis is important in understanding nutrient, herbal cofactors, and lifestyle influences on endocrine disorders, such as obesity and physiological homeostasis to develop targeted intervention strategies.[105]

Spine- and Joint-Related Therapies: A discipline of care that specializes in assessment and manipulation of spinal and joint misalignments that affect the body's muscular-skeletal and nerve functions. Patients most often present with stressors of pain but can also present with nerve and immune distress symptoms (eg, suppression of vagal nerve functionality affecting immune integrity and nerve function). These stressors can influence nutrient needs and may benefit from nutrient interventions. These therapies manipulating musculoskeletal, lymphatic, and energetic meridian tissues can be provided by the chiropractic, osteopathic, acupuncture, and/or massage therapy disciplines.[21]

Systems Biology: Systems biology is the recognition of integration of systems of biological components, which may be molecules, cells, and organisms working together as a whole contributing to the full function of an organism. This paradigm in clinical medicine provides new prospects for determining the causes of the complexity of human disease, the human host microbiome, and finding possible cures. [75-78]

(continued on next page)

The Patient's Story: "The patient's experience can describe a history that could provide both patient and clinician a better understanding of the causes of the patient's illness. A conceptual tool that has the effect of giving the patient insight into previous life events and validates for them that their story has been heard, both of which help to motivate them to make lifestyle modifications and engage more fully in the treatment plan. It is patient-centered because it places central importance on the patient's experience, not just the clinician's interpretation of the patient's symptoms."[21,47,48] Listening to a patient's story may reveal antecedents/triggers/mediators that may help identify and understand conditions that underlie an illness or dysfunction.

the three practice levels in support of safety, effectiveness, and quality in NIFM practice remain the expectations of each revision to serve future practitioners and their patients, clients, and customers. Integrative and functional medicine is a rapidly expanding health care field that includes nutrition and lifestyle factors as key components in addressing the complex challenges of disease prevention and treatment. RDNs have an opportunity to meet workforce demands by combining the two medical nutrition therapy approaches of conventional and integrative and functional medicine.[53,87,88]

SUMMARY

Applying standards of practice appropriately is essential to providing safe, timely, patient-/client-centered quality care and service. All RDNs are advised to conduct their practice based on the most recent edition of the Code of Ethics, the Scope of Practice for RDNs, and the SOP in Nutrition Care and SOPP for RDNs, along with applicable federal and state regulations and facility accreditation standards. The SOP and SOPP for RDNs in NIFM are interrelated documents and key resources for RDNs at all knowledge and performance levels. These standards can and should be used by RDNs as a professional resource for self-evaluation and professional development, and in daily practice to consistently improve and appropriately demonstrate competence and value as providers of safe, effective, and quality nutrition and dietetics care and services. Just as a professional's self-evaluation and continuing education are an ongoing process, these standards are also a work in progress and will be reviewed and updated every 7 years.

Current and future initiatives of the Academy, as well as advances in NIFM care and services, will provide information to use in updates and in further clarifying and documenting the specific roles and responsibilities of RDNs in NIFM at each level of practice. As a quality initiative of the Academy and the DIFM DPG, these standards are an application of continuous quality improvement and represent an important collaborative endeavor.

These standards have been formulated to be used for individual self-evaluation, practice advancement, development of practice guidelines and specialist credentials, and as indicators of quality. These standards do not constitute medical or other professional advice, and should not be taken as such. The information presented in these standards is not a substitute for the exercise of professional judgment by the nutrition and dietetics practitioner. These standards are not intended for disciplinary actions or determinations of negligence or misconduct. The use of the standards for any other purpose than that for which they were formulated must be undertaken within the sole authority and discretion of the user.

References

1. Ford D, Raj S, Batheja RK, Debusk R, Grotto D, Noland D, et al. American Dietetic Association: Standards of Practice and Standards of Professional Performance for Registered Dietitians (Competent, Proficient, and Expert) in Integrative and Functional Medicine. *J Am Diet Assoc*. 2011;111(6):902-913e23.
2. Academy of Nutrition and Dietetics Quality Management Committee. Academy of Nutrition and Dietetics: Revised 2017 Standards of Practice in Nutrition Care and Standards of Professional Performance for Registered Dietitian Nutritionists. *J Acad Nutr Diet*. 2018;118(1):132-140.e15.
3. Academy of Nutrition and Dietetics. Commission on Dietetic Registration Code of Ethics for the Nutrition and Dietetics Profession. Academy of Nutrition and Dietetics website. https://www.eatrightpro.org/practice/code-of-ethics/what-is-the-code-of-ethics. Accessed March 27, 2019.
4. Academy of Nutrition and Dietetics Quality Management Committee. Academy of Nutrition and Dietetics: Revised 2017 Scope of Practice for the Registered Dietitian Nutritionist. *J Acad Nutr Diet*. 2018;118(1):141-165.
5. Scope of Practice Decision Algorithm. Academy of Nutrition and Dietetics website. www.eatrightpro.org/scope. Accessed March 27, 2019.
6. US Department of Health and Human Services, Centers for Medicare and Medicaid Services. State Operations Manual. Appendix A-Survey protocol, regulations and interpretive guidelines for hospitals (Rev. 183, 10-12-18); §482.12(a)(1) Medical Staff, Non-physician practitioners; §482.23(c)(3)(i) Verbal Orders; §482.24(c)(2) Orders. https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_a_hospitals.pdf. Accessed March 27, 2019.
7. US Department of Health and Human Services, Centers for Medicare and Medicaid Services. State Operations Manual. Appendix W-Survey protocol, regulations and interpretive guidelines for critical access hospitals (CAHs) and swing-beds in CAHs (Rev. 183, 10-12-18); §485.635(a)(3)(vii) Dietary Services; §458.635(d)(3) Verbal Orders. https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_w_cah.pdf. Accessed March 27, 2019.
8. US Department of Health and Human Services. Centers for Medicare and Medicaid Services. 42 CFR Parts 413, 416, 440 et al. Medicare and Medicaid Programs; Regulatory provisions to promote program efficiency, transparency, and burden reduction; Part II; Final Rule (FR DOC #2014-10687; pp 27106-27157). http://www.gpo.gov/fdsys/pkg/FR-2014-05-12/pdf/2014-10687.pdf. Accessed March 27, 2019.
9. US Department of Health and Human Services, Centers for Medicare and Medicaid Services. Medicare and Medicaid Programs; reform of requirements for long-term care facilities. 42 CFR Parts 405, 431, 447, 482, 483, 485, 488, and 489. Final Rule (FR DOC#2016; pp 68688-68872)—Federal Register October 4, 2016; 81(192): 68688-68872; §483.30(f)(2) Physician services (pp 65-66), §483.60 Food and Nutrition Services (pp 89-94), §483.5

Definitions (p 161), §483.60 Food and Nutrition Services (pp 177-178). https://www.federalregister.gov/documents/2016/10/04/2016-23503/medicare-and-medicaid-programs-reform-of-requirements-for-long-term-care-facilities. Accessed March 27, 2019.

10. US Department of Health and Human Services, Centers for Medicare and Medicaid Services. State Operations Manual-Appendix PP Guidance to surveyors for long-term care facilities (Rev. 173, 11-22-17); §483.30 Physician Services, §483.60 Food and Nutrition Services. https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/som107ap_pp_guidelines_ltcf.pdf. Accessed March 27, 2019.
11. Swan WI, Hakel-Smith NA, et al. Nutrition Care Process and Model update: Toward realizing people-centered care and outcomes management. *J Acad Nutr Diet*. 2017;117(12):2003-2014.
12. Hennig B, Ormsbee L, McClain CJ, et al. Nutrition can modulate the toxicity of environmental pollutants: Implications in risk assessment and human health. *Environ Health Perspect*. 2012;120(6):771-774.
13. Cantwell MF. Map of the spirit: Diagnosis and treatment of spiritual disease. *Adv Mind Body Med*. 2008;23(2):6-16.
14. The Joint Commission. Glossary. In: *2019 Comprehensive Accreditation Manual for Hospitals (CAMH)*. Oak Brook, IL: Joint Commission Resources; 2018:GL-1.
15. Shared Decision Making. National Learning Consortium website. https://www.healthit.gov/sites/default/files/nlc_shared_decision_making_fact_sheet.pdf. Published December 2013. Accessed March 27, 2019.
16. The SHARE Approach. Agency for Healthcare Research and Quality website. https://www.ahrq.gov/professionals/education/curriculum-tools/shareddecisionmaking/index.html. Updated February 2017. Accessed March 27, 2019.
17. National Quality Partners Shared Decision Making Action Team. National Quality Forum website. http://www.qualityforum.org/National_Quality_Partners_Shared_Decision_Making_Action_Team_.aspx. Accessed March 27, 2019.
18. Dreyfus HL, Dreyfus SE. *Mind over Machine: The Power of Human Intuition and Expertise in the Era of the Computer*. New York, NY: Free Press; 1986.
19. Academy of Nutrition and Dietetics. Definition of terms. www.eatrightpro.org/scope. Accessed March 27, 2019.
20. Rakel D, ed. *Integrative Medicine*. 4th ed. Philadelphia, PA: Elsevier; 2017.
21. Bennet P, Bland J, Galland L, et al. *Textbook of Functional Medicine*. 2nd ed. Gig Harbor, WA: The Institute for Functional Medicine; 2010:5-14, 27-32, 215-346, 689-702.
22. What is Functional Medicine: The Functional Medicine Approach. The Institute for Functional Medicine website. https://www.ifm.org/functional-medicine/what-is-functional-medicine/. Accessed March 27, 2019.
23. Statistics on Complementary and Integrative Health Approaches. National Center for Complementary and Integrative Health Website. https://nccih.nih.gov/research/statistics. Updated November 8, 2018. Accessed March 27, 2019.
24. Gannotta R, Malik S, Chan AY, Urgun K, Hsu F, Vadera S. Integrative medicine as a vital component of patient care. *Cureus*. 2018;10(8):e3098.
25. Horrigan B, Lewis S, Abrams DI, Pechura C. Integrative medicine in America—How integrative medicine is being practiced in clinical centers across the United States. *Global Adv Health Med*. 2012;1(3):18-94.
26. Brooks A, Silverman L, Wallen GR. Shared decision making: A fundamental tenet in a conceptual framework of integrative healthcare delivery. *Integr Med Insights*. 2013;8(1):29-36.
27. Lord RS, Bralley JA. *Laboratory Evaluations for Integrative and Functional Medicine*. 2nd ed. Duluth, GA: Metametrix Institute; 2008.
28. Academy of Nutrition and Dietetics. Case Study: Initiating Orders for Nutrition-Related Laboratory Tests for RDNs Practicing in Hospital, Ambulatory and Private Practice Settings. https://www.eatrightstore.org/product-type/case-studies-and-practice-tips/case-study-initiating-orders-for-functional-medicine-labs. Updated May 2018. Accessed March 27, 2019.
29. Redmond E. The biochemistry behind functional lab assessment. Dietitians in Integrative and Functional Medicine Dietetic Practice Group. *Integr RDN*. 2018;21(1).
30. Galland L. *Power Healing: Use the New Integrated Medicine to Cure Yourself*. New York, NY: Random House; 1997.
31. Williams R. *Biochemical Individuality*. New Canaan, CT: Keats Publishing Inc; 1998.
32. Shao A, Mackay D. A commentary on the nutrient-chronic disease relationship and the new paradigm of evidence-based nutrition. *Nat Med J*. 2010;2(12).
33. Harvie R, Chanyl R, Burton J, Schultz M. Using the human gastrointestinal microbiome to personalize nutrition advice: Are registered dietitian nutritionists ready for the opportunities and challenges? *J Acad Nutr Diet*. 2017;117(12):1865-1869.
34. Bodai BI, Nakata TE, Wong WT, et al. Lifestyle medicine: A brief review of its dramatic impact on health and survival. *Perm J*. 2018;22:17-025.
35. Minich DM, Bland JS. Personalized lifestyle medicine: Relevance for nutrition and lifestyle recommendations. *Sci World J*. 2013;129841:1-14.
36. Cline JC. Nutritional aspects of detoxification in clinical practice. *Altern Ther Health Med*. 2015;21(3):54-62.
37. Institute for Functional Medicine. https://www.ifm.org/. Accessed March 27, 2019.
38. Heaney R. Long latency deficiency disease: Insights from calcium and vitamin D. EV McCollum Award Lecture. *Am J Clin Nutr*. 2003;78(5):912-919.
39. Institute of Medicine. *Evaluation of Biomarkers and Surrogate Endpoints in Chronic Disease*. Washington, DC: The National Academies Press; 2010.
40. Ronto R, Wu JH, Singh GM. The global nutrition transition: Trends, disease burdens and policy interventions. *Public Health Nutr*. 2018;21(12):2267-2270.
41. Popkin BM, Adair LS, Ng SW. Now and then: The global nutrition transition: The pandemic of obesity in developing countries. *Nutr Rev*. 2012;70(1):3-21.
42. Maizes V, Rakel D, Niemiec C. Integrative medicine and patient-centered care. *Explore (NY)*. 2009;5(5):277-289.
43. Politi MC, Lewis CL, Frosch DL. Supporting shared decisions when clinical evidence is low. *Med Care Res Rev*. 2013;70(suppl 1):113S-128S.
44. Andersson N. Participatory research—A modernizing science for primary health care. *J Gen Fam Med*. 2018;19(5):154-159.
45. Murphy WJ, Yadrick MM, Steiber AL, Mohan V, Papoutsakis C. Academy of Nutrition and Dietetics Health Informatics Infrastructure (ANDHII): A pilot study on the documentation of the nutrition care process and the usability of ANDHII by registered dietitian nutritionists. *J Acad Nutr Diet*. 2018;118(10):1966-1974.
46. Murphy D, Dittloff M. The Clinician's Guide to Using the Academy of Nutrition and Dietetics Health Informatics Infrastructure (ANDHII). Renal Nutrition Dietetic Practice Group. *Renal Nutr Forum*. 2018;37(3):19-21.
47. Clark J. The narrative in patient-centred care. *Br J Gen Pract*. 2008;58(557):896.
48. Tractenberg RE, Garver A, Ljungberg IH, Schladen MM, Groah SL. Maintaining primacy of the patient perspective in the development of patient-centered patient reported outcomes. *PLoS One*. 2017;12(3):1-20.
49. Camp KM, Trujillo E. Position of the Academy of Nutrition and Dietetics: Nutritional genomics. *J Acad Nutr Diet*. 2014;114(2):299-312.
50. Nutritional Genomics: What you need to know. Dietitians in Integrative and Functional Medicine website. Accessed, https://integrativerd.org/nutritional-genomics/. Accessed March 27, 2019.
51. Hoffman JB, Petriello MC, Hennig B. Impact of nutrition on pollutant toxicity: An update with new insights into epigenetic regulation. *Rev Environ Health*. 2017;32(1-2):65-72.
52. Complementary, Alternative, or Integrative Health: What's In a Name? National Center for Complementary and Integrative Health website. https://nccih.nih.gov/health/integrative-health. Accessed March 27, 2019.
53. Wagner L, Evans R, Noland D, Barkley R, Sullivan D, Drisko J. The next generation of dietitians: Implementing dietetics

education and practice in integrative medicine. *J Am Coll Nutr*. 2015;34(5):430-435.

54. Sladdin I, Ball L, Bull C, Chaboyer W. Patient-centered care to improve dietetic practice: An integrative review. *J Hum Nutr Diet*. 2017;30(4):456-470.
55. Noland D, Wagner L, Evans R, Barkley R, Drisko J, Sullivan D. *Dietetics and Integrative Medicine: Curriculum Development Model*. Kansas City, KS: Create Space Publishing; 2016.
56. Pizzorno JE, Murray MT, eds. *Textbook of Natural Medicine*. 4th ed. Oxford, UK: Elsevier; 2013:8-17, 224-233.
57. Swift KM, Noland D, Redmond E. The Radial: Integrative and functional medical nutrition therapy. https://integrativerd.org/ifmnt-radial/. Accessed March 27, 2019.
58. Esper DH. Utilization of nutrition-focused physical assessment in identifying micronutrient deficiencies. *Nutr Clin Pract*. 2015;30(2):194-202.
59. Mordarski J, Wolff J. *Nutrition Focused Physical Exam Pocket Guide*. 2nd ed. Chicago, IL: Academy of Nutrition and Dietetics; 2018. https://www.eatrightstore.org/product-type/pocket-guides/nutrition-focused-physical-exam-pocket-guide-second-edition. Accessed March 27, 2019.
60. Biomarkers Definitions Working Group. Biomarkers and surrogate endpoints: Preferred definitions and conceptual framework. *Clin Pharmacol Ther*. 2001;69(3):89-95.
61. WHO International Programme on Chemical Safety Biomarkers in Risk Assessment: Validity and validation. World Health Organization website. http://www.inchem.org/documents/ehc/ehc/ehc222.htm. Published 2001. Accessed March 27, 2019.
62. An overview of food and nutritional toxicology. In: Omaye ST, Wallace Hayes A, Clemens R, eds. *Food and Nutritional Toxicology*. Boca Raton, FL: CRC Press; 2004:3-10.
63. IFT Expert Panel. Functional foods: Opportunities and challenges. Institute of Food Technology website. http://www.ift.org/~/media/Knowledge%20Center/Science%20Reports/Expert%20Reports/Functional%20Foods/Functionalfoods_expertreport_full.pdf. Accessed March 27, 2019.
64. Crowe KM, Francis C. Position of the Academy of Nutrition and Dietetics: Functional foods. *J Acad Nutr Diet*. 2013;113(8):1096-1103.
65. Rozga M, Handu D. Nutritional genomics in precision nutrition: An Evidence Analysis Library scoping review. *J Acad Nutr Diet*. 2019;119(3):507-515.e7.
66. Marra MV, Bailey RL. Position of the Academy of Nutrition and Dietetics: Micronutrient supplementation. *J Acad Nutr Diet*. 2018;118(11):2162-2173.
67. Hodges RE, Minich DM. Modulation of metabolic detoxification pathways using foods and food-derived components: A scientific review with clinical application. *J Nutr Metab*. 2015;2015:760689.
68. Fortney L, Podein R, Hernke M. Detoxification. In: Rakel D, ed. *Integrative Medicine*. 4th ed. Philadelphia, PA: Elsevier; 2017:996-1003.
69. Agency for Toxic Substances and Disease Registry. Glossary. https://www.atsdr.cdc.gov/risk/prhs/glossary.html. Accessed March 27, 2019.
70. The University of Arizona Center for Integrative Medicine. https://integrativemedicine.arizona.edu/. Accessed March 27, 2019.
71. Dietitians in Integrative and Functional Medicine Dietetic Practice Group. DIFM: The Integrative RDNs. https://integrativerd.org/what-is-difm/. Accessed March 27, 2019.
72. Wright OR. Systematic review of knowledge, confidence and education in nutritional genomics for students and professionals in nutrition and dietetics. *J Hum Nutr Diet*. 2014;27(3):298-307.
73. Neustadt J, Pieczenik S. The important role of biochemical individuality (patient handout). *Integr Med*. 2007;6(3):34-35.
74. Ayurvedic medicine: In depth. National Center for Complementary and Integrative Health website. https://nccih.nih.gov/health/ayurveda/introduction.htm. Accessed March 27, 2019.
75. van Ommen B, van den Brock T, de Hoogh I, et al. Systems biology of personalized nutrition. *Nutr Rev*. 2017;75(8):579-599.
76. Wanjek C. Systems biology as defined by NIH. National Institutes of Health website. https://irp.nih.gov/catalyst/v19i6/systems-biology-as-defined-by-nih. Accessed March 27, 2019.
77. Breitling R. What is systems biology? *Front Physiol*. 2010;1:9.
78. Bousquet J, Anto JM, Sterk PJ, et al. Systems medicine and integrated care to combat chronic noncommunicable diseases. *Genome Med*. 2011;3(7):43.
79. Goodman EM, Redmond J, Elia E, Harris SR, Augustine MB, Hand RK. Practice roles and characteristics of integrative and functional nutrition registered dietitian nutritionists. *J Acad Nutr Diet*. 2018;118(12):2356-2368.e1.
80. Goodman EM, Redmond J, Elia E, Harris SR, Augustine MB, Hand RK. Assessing clinical judgment and critical thinking skills in a group of experienced integrative and functional nutrition registered dietitian nutritionists. *J Acad Nutr Diet*. 2018;118(12):2346-2355.e4.
81. Augustine MB, Swift KM, Harris SR, Anderson EJ, Hand RK. Integrative medicine: Education, perceived knowledge, attitudes, and practice among Academy of Nutrition and Dietetics members. *J Acad Nutr Diet*. 2016;116(2):319-329.
82. Weddle DO, Himburg SP, Collins N, Lewis R. The professional development portfolio process: Setting goals for credentialing. *J Am Diet Assoc*. 2002;102(10):1439-1444.
83. Worsfold L, Grant BL, Barnhill C. The essential practice competencies for the Commission on Dietetic Registration's credentialed nutrition and dietetics practitioners. *J Acad Nutr Diet*. 2015;115(6):978-984.
84. Gates GR, Amaya L. Ethics opinion: Registered dietitian nutritionists and nutrition and dietetics technicians, registered are ethically obligated to maintain personal competence in practice. *J Acad Nutr Diet*. 2015;115(5):811-815.
85. Jortberg BT, Fleming MO. Registered dietitian nutritionists bring value to emerging health care delivery models. *J Acad Nutr Diet*. 2014;114(12):2017-2022.
86. Chambers DW, Gilmore CJ, Maillet JO, Mitchell BE. Another look at competency-based education in dietetics. *J Am Diet Assoc*. 1996;96(6):614-617.
87. Grace-Farfaglia P, Pickett-Bernard DL, Gorman AW, Dehpahlavan J. Blurred lines: Emerging practice for registered dietitian-nutritionists in integrative and functional nutrition. *Complement Ther Clin Pract*. 2017;28(Aug):212-219.
88. Rhea M, Bettles C. Future changes driving dietetics workforce supply and demand: Future scan 2012-2022. Workforce Demand Study Results and Recommendations. *J Acad Nutr Diet*. 2012;112(3 suppl 1):S10-S24.
89. Gahl WA. Chemical individuality: Concept and outlook. *J Inherit Metab Dis*. 2008;31(5):630-640.
90. Patterson AD, Turnbaugh PJ. Microbial determinants of biochemical individuality and their impact on toxicology and pharmacology. *Cell Metab*. 2014;20(5):761-768.
91. Williams RJ. *Biochemical Individuality: The Basis for the Genetotrophic Concept*. New York: John Wiley & Sons; 1963.
92. Cellular respiration and fermentation. In: Urry LA, Cain ML, Wasserman SA, Minorsky PV, Reece JB, eds. *Campbell Biology*. 11th ed. New York: Pearson Education; 2017:164-186.
93. What is epigenetics? Genetics Home Reference, US National Library of Medicine website. https://ghr.nlm.nih.gov/primer/howgeneswork/epigenome. Published April 17, 2018. Accessed March 27, 2019.
94. Dean W. Mitochondrial dysfunction, nutrition and aging. Nutrition Review website. https://nutritionreview.org/2013/09/mitochondrial-dysfunction/. Accessed March 27, 2019.
95. What is genetic testing? National Institutes of Health website. https://ghr.nlm.nih.gov/primer/testing/genetictesting. Accessed March 27, 2019.
96. Neeha VS, Kinth P. Nutrigenomics research: A review. *J Food Sci Technol*. 2013;50(3):415-428.
97. Glossary. National Human Genome Research Institute website. https://www.genome.gov/glossary/index.cfm?id=88&textonly=true. Accessed March 27, 2019.
98. Jin B, Li Y, Robertson KD. DNA methylation superior or subordinate in the

epigenetic hierarchy? *Genes Cancer*. 2011;2(6):607-617.

99. Andersen GB, Tost J. A summary of the biological processes, disease-associated changes, and clinical applications of DNA methylation. *Methods Mol Biol*. 2018;1708:3-30.

100. Herst PM, Rowe MR, Carson GM, Berridge MV. Functional mitochondria in health and disease. *Front Endocrinol*. 2017;8(296):1-16.

101. Swerdlow R. The neurodegenerative mitochondriopathies. *J Alzheimers Dis*. 2010;14(4):737-751.

102. Theron M, Rykers Lues JF. *Organic Acids and Food Preservation*. Boca Raton, FL: CRC Press; 2010.

103. Phthalates Factsheet. Centers for Disease Control and Prevention website. https://www.cdc.gov/biomonitoring/Phthalates_FactSheet.html. Updated April 7, 2017. Accessed March 27, 2019.

104. What are single nucleotide polymorphisms (SNPs)? Genetics Home Reference, US National Library of Medicine website. https://ghr.nlm.nih.gov/primer/genomicresearch/snp. Published April 17, 2018. Accessed March 27, 2019.

105. Miller WL, Auchus RJ. The molecular biology, biochemistry, and physiology of human steroidogenesis and its disorders. *Endocr Rev*. 2011;32(1):81-151.

AUTHOR INFORMATION

D. Noland is a member of the dietetics and nutrition adjunct faculty, School of Health Professions, University of Kansas Medical Center, Kansas City. S. Raj is a teaching professor, Department of Public Health, Food Studies and Nutrition, Syracuse University, Syracuse, NY.

Address correspondence to: Diana Noland, MPH, RDN, LD, School of Health Professions, University of Kansas Medical Center, 3901 Rainbow Blvd, Mail Stop 2007, Kansas City, KS 66160. E-mail: Diana@diananoland.com

STATEMENT OF POTENTIAL CONFLICT OF INTEREST

No potential conflict of interest was reported by the authors.

FUNDING/SUPPORT

There is no funding to disclose.

ACKNOWLEDGEMENTS

Special acknowledgement and thanks to Monique Richard, MS, RDN, LDN, FAND, and Kathie M. Swift, MS, RDN, LDN, FAND, who willingly gave of their time to review these standards, and the Dietitians in Integrative and Functional Medicine Dietetic Practice Group's Executive Committee. The authors also extend thanks to all who were instrumental in the process for the revisions of the article. Finally, the authors thank Academy staff, in particular, Carol Gilmore, MS, RDN, LD, FADA, FAND; Dana Buelsing, MS; Karen Hui, RDN, LDN; and Sharon McCauley, MS, MBA, RDN, LDN, FADA, FAND, who supported and facilitated the development of these SOP and SOPPs.

AUTHOR CONTRIBUTIONS

Both authors wrote the first draft with contributions from a reviewer. Both authors reviewed and commented on subsequent drafts of the manuscript. Both authors contributed to editing the components of the article (eg, article text and figures) and reviewed all drafts of the manuscript.

Standards of Practice for Registered Dietitian Nutritionists in Nutrition in Integrative and Functional Medicine (NIFM)
Standard 1: Nutrition Assessment
The registered dietitian nutritionist (RDN) uses accurate and relevant data and information to identify nutrition-related problems.
Rationale:
Nutrition screening is the preliminary step to identify individuals who require a nutrition assessment performed by an RDN. Nutrition assessment is a systematic process of obtaining and interpreting data in order to make decisions about the nature and cause of nutrition-related problems, and provides the foundation for nutrition diagnosis. It is an ongoing, dynamic process that involves not only initial data collection, but also reassessment and analysis of patient/client or community needs. Nutrition assessment is conducted using validated tools based in evidence, the five domains of nutrition assessment, and comparative standards. Nutrition assessment may be performed via in-person, or facility/practitioner assessment application, or Health Insurance Portability and Accountability Act (HIPAA)—compliant video conferencing telehealth platform.

Indicators for Standard 1: Nutrition Assessment					
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
1.1	***Patient/client/population history:* Assesses current and past information related to personal, medical, family, and psychosocial/social history**		**X**	**X**	**X**
	1.1A	Assesses personal, family history, and genetic factors related to current acute and chronic disorders (eg, diabetes, cardiovascular disease, neurological disorders, mental or behavioral health disorder, substance use disorder) considering antecedents (preceding events), triggers (precipitates an event), and mediators (promotes a reaction) of health and disease	X	X	X
	1.1B	Listens for The Patient's Story,* which provides background and the individual's perspective on their lifestyle, health status, and factors related to their disease(s)/conditions(s), when applicable, and goals	X	X	X
	1.1C	Assesses (using tools such as the Functional Medicine Matrix [Figure 6] or the Integrative and Functional Medical Nutrition Therapy [IFMNT][a] Radial [Figure 7]) symptoms or problems related to, imbalances of: • structural integrity (cellular, muscular-skeletal) • digestion, assimilation, and microbiome/gastrointestinal • biotransformation and elimination* • energy metabolism* (eg, cellular respiration,* mitochondriopathies,* obesity) • defense and repair (immune, inflammation, infection) • communication (endocrine [eg, steroidogenesis*], neurotransmitters, immune) • transport (cardiovascular and lymphatic systems) • nutritional status		X	X

(continued on next page)

Figure 1. Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 1: Nutrition Assessment					
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
1.2	***Anthropometric assessment:* Assesses anthropometric indicators (eg, height, weight, body mass index [BMI], waist circumference, arm circumference), comparison to reference data (eg, percentile ranks/*z*-scores), and individual patterns and history**		**X**	**X**	**X**
	1.2A	Identifies appropriate adult and pediatric reference standards for comparison	X	X	X
	1.2B	Identifies and interprets trends in anthropometric indices (eg, suboptimal growth and development or overweight/obesity in children, adolescents, teens) considering current medical diseases/conditions, or reported concerns	X	X	X
1.3	***Biochemical data, medical tests, and procedure assessment:* Assesses laboratory profiles (eg, acid–base balance, renal function, endocrine function, inflammatory response, vitamin/mineral profile, and lipid profile), and medical tests and procedures (eg, gastrointestinal study, metabolic rate)**		**X**	**X**	**X**
	1.3A	Assesses diagnostic test results, biochemical and nutrition status biomarkers, * procedures, and/or evaluations	X	X	X
	1.3B	Assesses results of conventional laboratory tests (eg, complete blood count, standard metabolic panel with protein status, plasma glucose, plasma lipid levels) for nutrition-related conditions, disease management, and prevention	X	X	X
	1.3C	Assesses conventional and functional laboratory data* related to nutritional insufficiencies, deficiencies and/or imbalances (eg, mineral status, amino acid profile, oxidative stress and antioxidant status, gastrointestinal health and digestive stool analysis, hormonal indicators, inflammatory marker results, and toxic load), and with training, genomic biomarkers* such as single nucleotide polymorphisms* (eg, vitamin D receptor, methylenetetrahydrofolate reductase)		X	X
	1.3D	Assesses diagnostic tests, procedures, and other evaluation methods of biochemical pathways and networks, and cellular, molecular, and physical aspects of nutrition-related function and dysfunction		X	X
	1.3E	Evaluates nutrigenomic/genetic assessment results to identify epigenetic* effects contributing to unique nutrient and lifestyle requirements to benefit nutritional metabolism		X	X
	1.3F	Determines necessity/potential benefit of initiating further diagnostic assessment(s) through interprofessional[a] referrals, if indicated		X	X
	1.3G	Integrates new diagnostic approaches as appropriate and available			X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 1: Nutrition Assessment						
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
1.4	***Nutrition-focused physical examination (NFPE) may include visual and physical examination:* Obtains and assesses findings from NFPE (eg, indicators of vitamin/mineral deficiency/toxicity, edema, muscle wasting, subcutaneous fat loss, altered body composition, oral health, feeding ability [suck/swallow/breathe], appetite, and affect)**			**X**	**X**	**X**
	1.4A	Reviews screening data or screens for nutrition risk (eg, malnutrition, nutrient deficits, food security) using evidence-based screening tools for the setting and/or population (adult or pediatric)		X	X	X
	1.4B	Uses evidence-based recommendations for guiding the NFPE and evaluating the physical or clinical findings		X	X	X
	1.4C	Assesses clinical signs and symptoms (eg, visual examination of face, mouth, nails, posture, level of energy, skin turgor, and frailty) during evaluation with physiological systems in mind which include: circulatory/cardiovascular, digestive, endocrine, immune, integumentary, musculoskeletal, nervous, reproductive, skeletal, urinary, and lymphatic		X	X	X
	1.4D	Assesses dental health, dentition, and mastication to identify barriers to nutrient availability as well as risk for periodontal tissue infection		X	X	X
	1.4E	Identifies clinical signs of malnutrition and/or abnormalities in structural integrity impacting altered metabolism that supports diet, nutrient, and lifestyle interventions to restore optimization of metabolism through an NIFM[b] systems biology* assessment			X	X
	1.4F	Assesses clinical signs of malnutrition, undernutrition, and eating disorders (eg, muscle wasting; dry, brittle, or thinning hair and nails; sarcopenia; and cachexia)			X	X
1.5	***Food and nutrition–related history assessment (ie, dietary assessment)*— Evaluates the following components:**					
	1.5A	**Food and nutrient intake, including composition and adequacy, meal and snack patterns, and appropriateness related to food allergies and intolerances**		**X**	**X**	**X**
		1.5A1	Assesses patient's/client's specific diet and lifestyle approaches (eg, high protein, vegan/vegetarian, macrobiotics, Ayurveda,* food elimination diets, biotransformation and elimination* [eg, detoxification] regimens/protocols, fasting, physical activity, sleep)		X	X
		1.5A2	Assesses patient's/client's appropriate use of added dietary components (eg, fiber, fatty acids, phytonutrients, functional food* ingredients, teas, elixirs, tinctures, therapeutic essential oils)		X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 1: Nutrition Assessment						
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
	1.5B	**Food and nutrient administration, including current and previous diets and diet prescriptions and food modifications, eating environment, and enteral and parenteral nutrition administration**		**X**	**X**	**X**
		1.5B1	Assesses adequacy and appropriateness of food and nutrient intake related to metabolic pathways, and networks and balances in core systems	X	X	X
		1.5B2	Assesses adequacy and appropriateness with regard to inflammatory control mechanisms, such as eicosanoid metabolites (eg, prostaglandins, thromboxanes, and leukotrienes) and immune modulators (eg, vitamin D)		X	X
	1.5C	**Medication and dietary supplement* use, including prescription and over-the-counter medications, and integrative and functional medicine products**		**X**	**X**	**X**
		1.5C1	Assesses dietary supplement* use (safety, efficacy, quality, application to health status, or disease state) and route of administration (oral, enteral, intramuscular, intravenous, other) using clinical databases and guidelines (eg, Natural Medicines Database, American Society for Parenteral and Enteral Nutrition [http://www.nutritioncare.org], American College for Advancement of Medicine [ACAM.org], International Society of Nutrigenetics/Nutrigenomics [http://www.nutritionandgenetics.org])	X	X	X
		1.5C2	Assesses drug/dietary supplement*—food—nutrient interactions	X	X	X
		1.5C3	Assesses appropriate use of dietary supplements* (eg, N-acetyl cysteine, B vitamins, fat-soluble vitamins, liver support products) for age, potential constraints in specific populations (eg, athletes, military personnel), and application to health status or disease state		X	X
		1.5C4	Assesses nutrition-related benefits and side effects of dietary supplement* and medication intake (eg, fluid retention, gastrointestinal [GI] disturbances, allergy)		X	X
		1.5C5	Assesses laboratory findings in relationship to targeted use of dietary supplement* (eg, red yeast rice and cholesterol; saw palmetto and prostate-specific antigen level)		X	X
		1.5C6	Provides training and monitors use of protocols and assessment tools for nutrition-related medication management, including food/dietary supplement* interaction(s) in collaboration with interprofessional team (eg, pharmacist, physician)			X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 1: Nutrition Assessment						
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
	1.5D	**Knowledge, beliefs, and attitudes (eg, understanding of nutrition-related concepts, emotions about food/nutrition/health, body image, preoccupation with food and/or weight, readiness to change nutrition- or health-related behaviors, and activities and actions influencing achievement of nutrition-related goals)**		**X**	**X**	**X**
		1.5D1	Engages with the patient/client/family/advocate[c] to identify personal preferences and goals, help identify barriers and solutions, while offering evidence-based nutrition information to support collaborative discussion through shared decision making[d] for achieving the desired outcomes	X	X	X
		1.5D2	Evaluates behavioral mediators (or antecedents) related to dietary intake (ie, attitudes, self-efficacy, knowledge, intentions, readiness, and willingness to change, perceived social support, outside influences/caregiver influences on behavior)	X	X	X
		1.5D3	Evaluates patient/client ability to identify evidence-based nutrition information among resources found in media and popular literature	X	X	X
	1.5E	**Food security defined as factors affecting access to a sufficient quantity of safe, healthful food and water, as well as food-/nutrition-related supplies**		**X**	**X**	**X**
		1.5E1	Assesses safe, healthful food/water/meal availability: • financial resources, access to farms, markets, and/or groceries; access to appropriate kitchen, pantry, and equipment for safely cooking, serving, and storing food • awareness and use of federal, state, or local resources for food (eg, Supplemental Nutrition Assistance Program, food banks/pantries, shelters) • use of family and/or community resources to maintain healthy lifestyle or improve lifestyle choices • barriers to adequate food access (eg, homelessness, transportation, finances, language, and cultural preferences)	X	X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 1: Nutrition Assessment						
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
	1.5F	**Physical activity, cognitive and physical ability to engage in developmentally appropriate nutrition-related tasks (eg, self-feeding and other activities of daily living [ADLs]), instrumental activities of daily living (IADLs) (eg, shopping, food preparation), and breastfeeding**		**X**	**X**	**X**
		1.5F1	Uses validated or commonly accepted developmental, functional, and mental status evaluation tools (eg, Karnofsky Performance Scale, Pediatric Quality of Life Inventory ADLs) that consider cultural, ethnic, and lifestyle factors		X	X
	1.5G	**Other factors affecting intake and nutrition and health status (eg, cultural, ethnic, religious, lifestyle influencers, psychosocial, and social determinants of health)**		**X**	**X**	**X**
		1.5G1	Assesses geographic residence related to food-nutrient availability and sunshine exposure for vitamin D status	X	X	X
		1.5G2	Assesses status of sleep and circadian rhythm for influence on nutrition status (eg, weight, hormone regulation, immune status)		X	X
		1.5G3	Assesses current environmental exposures in foods, beverages, as well as exposures in food containers, and household cleaners (eg, toxins like pesticides, phthalates,* heavy metals, pathogens)		X	X
1.6	***Comparative standards*: Uses reference data and standards to estimate nutrient needs and recommended body weight, BMI, and desired growth patterns**			**X**	**X**	**X**
	1.6A	**Identifies the most appropriate reference data and/or standards (eg, international, national, state, institutional, and regulatory) based on practice setting and patient-/client-specific factors (eg, age and disease state)**		**X**	**X**	**X**
		1.6A1	Compares nutrition assessment data to appropriate criteria, relevant norms, population-based surveys, standards (eg, Academy of Nutrition and Dietetics [Academy], The National Academies of Sciences, Engineering, and Medicine: Health and Medicine Division) and positions for determining nutrition-related recommendations	X	X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 1: Nutrition Assessment						
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
		1.6A2	Evaluates conventional and NIFM nutrition recommendations and possible consequences considering: • applicable population studies and guidelines on nutrient needs (eg, Dietary Reference Intakes) • individual's needs based on NFPE and functional laboratory biomarkers*		X	X
		1.6A3	Evaluates nutrient recommendations and their consequences for an individual based on NFPE, blood chemistry, and functional laboratory biomarkers*		X	X
		1.6A4	Evaluates population-based surveys and studies for bias and valid conclusions to consider for clinical application		X	X
	1.6B		Recognizes and incorporates guidelines from other practice areas (eg, nutrition support, renal, diabetes, oncology, weight management) into IFMNT-focused assessment guidelines and practices applicable to population(s) and setting(s)			X
1.7	***Physical activity habits and restrictions:* Assesses physical activity, history of physical activity, and physical activity training**			**X**	**X**	**X**
	1.7A		Compares usual activity level to current age-appropriate physical activity guidelines (https://health.gov/paguidelines/)	X	X	X
	1.7B		Assesses physical activity limitations, such as functional disability (eg, vision, mobility, dexterity), environmental safety, medical condition(s), and/or medication contraindications, and physical inactivity (eg, television/screen and other sedentary activity time)	X	X	X
	1.7C		Assesses metabolic needs related to physical activity (eg, evaluation of hydration status, adequacy of nutrient intake, and impact of inflammation/oxidative stress on nutrient needs)		X	X
1.8	**Collects data and reviews collected and/or documented data by the nutrition and dietetics technician, registered (NDTR), other health care practitioner(s), patient/client, or staff for factors that affect nutrition and health status**			**X**	**X**	**X**
	1.8A		Evaluates the potential impact of current or planned medical treatment (eg, for diabetes, cancer, other chronic conditions) on nutrition status and lifestyle	X	X	X
	1.8B		Reviews data from multiple sources to contribute to identifying potential nutrition diagnosis(es) and NIFM approaches that would complement medical treatments		X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 1: Nutrition Assessment					
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
1.9	**Uses collected data to identify possible problem areas for determining nutrition diagnoses**		**X**	**X**	**X**
	Considers the following:				
	1.9A	Appropriateness of current energy intake, nutrient intake, and use of dietary supplements* for special conditions (eg, pregnancy, lactation, disease condition, physical training)	X	X	X
	1.9B	Appropriateness of foods, fluids, dietary supplements,* physical activity, and lifestyle on individual metabolic functions		X	X
	1.9C	Risk of exposure to exogenous toxins, including heavy metals, solvents, persistent organic compounds (eg, insecticides, pesticides, herbicides, phthalates*), electromagnetic fields		X	X
	1.9D	Risk of nutrition-related chronic and acute complications (eg, GI, metabolic, infectious, musculoskeletal, hormonal, sleep disturbances)		X	X
	1.9E	Functional laboratory assessment results to identify metabolic pathways and long latency nutritional insufficiencies and deficiencies* to guide nutrition recommendations			X
1.10	**Documents and communicates:**		**X**	**X**	**X**
	1.10A	**Date and time of assessment**	**X**	**X**	**X**
	1.10B	**Pertinent data (eg, The Patient's Story*; medical, nutrient, and disease/condition; social, behavioral, and lifestyle influences)**	**X**	**X**	**X**
	1.10C	**Comparison to appropriate standards**	**X**	**X**	**X**
	1.10D	**Patient/client/population perceptions, values, and motivation related to presenting problems**	**X**	**X**	**X**
	1.10E	**Changes in patient/client/advocate/population perceptions, values and motivation related to presenting problems**	**X**	**X**	**X**
	1.10F	**Reason for discharge/discontinuation or referral, if appropriate**	**X**	**X**	**X**

Examples of Outcomes for Standard 1: Nutrition Assessment

- Appropriate assessment tools and procedures are used in valid and reliable ways
- Appropriate and pertinent data are collected
- Effective interviewing methods are used
- Data are organized and in a meaningful framework that relates to nutrition problems
- Use of assessment data leads to the determination that a nutrition diagnosis/problem does or does not exist
- Problems that require consultation with or referral to another provider are recognized
- Documentation and communication of assessment are complete, relevant, accurate, and timely

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Standard 2: Nutrition Diagnosis
The registered dietitian nutritionist (RDN) identifies and labels specific nutrition problem(s)/diagnosis(es) that the RDN is responsible for treating.
Rationale:
Analysis of the assessment data leads to identification of nutrition problems and a nutrition diagnosis(es), if present. The nutrition diagnosis(es) is the basis for determining outcome goals, selecting appropriate interventions, and monitoring progress. Diagnosing nutrition problems is the responsibility of the RDN.

Indicators for Standard 2: Nutrition Diagnosis						
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
2.1	**Diagnoses nutrition problems based on evaluation of assessment data and identifies supporting concepts (ie, etiology, signs, and symptoms)**			**X**	**X**	**X**
	2.1A	Determines the functional root cause/etiology of the problem(s) (eg, genetic, food/food intake, infection, stress, allergens, sleep, movement, toxins and environment, inadequate nutrient status); seeks assistance if needed		X	X	X
	2.1B	Systematically compares and contrasts findings in formulating a differential nutrition diagnosis(es)			X	X
	2.1C	Approaches identifying diagnoses through a systems biology* pattern recognition for underlying nutritional and lifestyle influences; considers:			X	X
		2.1C1	Presence of medical conditions, and systems, pathways, and core clinical imbalances* that are involved		X	X
		2.1C2	Abnormal significant clinical indicators, such as temporal wasting, stature changes, and skin elasticity depletion		X	X
		2.1C3	Anticipation of unintended consequences, such as digestive intolerance and sleep disturbance		X	X
		2.1C4	Compromised lifestyle, sleep, movement, eating choices, toxin exposure influencing nutritional metabolism			X
	2.1D	Integrates complex information related to food intake, biochemical data, diagnostic tests, clinical complications and their management within an interprofessional environment or need for consultation with other providers when formulating a nutrition diagnosis(es)				X
2.2	**Prioritizes the nutrition problem(s)/diagnosis(es) based on severity, safety, patient/client needs and preferences, ethical considerations, likelihood that nutrition intervention/plan of care will influence the problem, discharge/transitions of care needs, and patient/client/advocate perception of importance**			**X**	**X**	**X**
	2.2A	Considers evidence-based research when ranking nutrition diagnosis(es) in order of importance		X	X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 2: Nutrition Diagnosis					
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
	2.2B	Considers biochemical individuality,* and genomic testing* data and influence on nutrient requirement(s) when ranking nutrition diagnosis(es) in order of importance		X	X
	2.2C	Uses experience and evaluation of evidence-based research in systems biology* and application of dietary supplement ingredients to rank nutrition diagnosis(es)		X	X
	2.2D	Understands the importance of considering the patient's/client's/advocate's wishes/goals as a key factor when ranking the nutritional diagnosis(es) in order of importance		X	X
	2.2E	Uses expert reasoning and full understanding of the literature, and evidence-based protocols that explain the specific differences between individuals			X
2.3	**Communicates the nutrition diagnosis(es) to patients/clients/advocates, community, family members, or other health care professionals when possible and appropriate**		**X**	**X**	**X**
	2.3A	Explains relevance of nutrition diagnosis(es) by retelling The Patient's Story* to the patient/client/family for validation	X	X	X
		2.3A1 Seeks collaboration with other members of the patient's/client's interprofessional team regarding the nutrition diagnosis(es)	X	X	X
	2.3B	Participates in developing communication protocols and pathways to meet the organization's/program's standards and the workflow of the setting, when applicable		X	X
2.4	**Documents the nutrition diagnosis(es) using standardized terminology and clear, concise written statement(s) (eg, using Problem [P], Etiology [E], and Signs and Symptoms [S] [PES statement(s)] or Assessment [A], Diagnosis [D], Intervention [I], Monitoring [M], and Evaluation [E] [ADIME statement(s)])**		**X**	**X**	**X**
	2.4A	Uses the electronic Nutrition Care Process Terminology (eNCPT) (https://www.ncpro.org/) for reporting diagnosis whenever possible (eg, inadequate [NI-4.1] or excessive [NI-4.2] bioactive substance intake, imbalance of nutrients [NI-5.4], inadequate energy intake [NI-1.4], impaired nutrient utilization [NC-2.1], increased nutrient need [NI-5.1])	X	X	X
	2.4B	Documents the nutrition diagnosis(es) incorporating IFMNT language (eg, excessive intake of bioactive substances related to large daily doses of gingko biloba, garlic, and ginseng while on warfarin therapy as evidenced by high prothrombin time and international normalized ratio (PT/INR) and recent bleeding episodes)	X	X	X
2.5	**Re-evaluates and revises nutrition diagnosis(es) when additional assessment data become available**		**X**	**X**	**X**

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Examples of Outcomes for Standard 2: Nutrition Diagnosis

- Nutrition Diagnostic Statements that accurately describe the nutrition problem of the patient/client and/or community in a clear and concise way
- Documentation of nutrition diagnosis(es) is relevant, accurate, and timely
- Documentation of nutrition diagnosis(es) is revised as additional assessment data become available

Standard 3: Nutrition Intervention/Plan of Care

The registered dietitian nutritionist (RDN) identifies and implements appropriate, person-centered interventions designed to address nutrition-related problems, behaviors, risk factors, environmental conditions, or aspects of health status for an individual, target group, or the community at large.

Rationale:

Nutrition intervention consists of two interrelated components—planning and implementation.

- Planning involves prioritizing the nutrition diagnoses, conferring with the patient/client and others, reviewing practice guidelines, protocols and policies, setting goals, and defining the specific nutrition intervention strategy.
- Implementation is the action phase that includes carrying out and communicating the intervention/plan of care, continuing data collection, and revising the nutrition intervention/plan of care strategy, as warranted, based on change in condition and/or the patient/client/population response.

An RDN implements the interventions or assigns components of the nutrition intervention/plan of care to professional, technical, and support staff in accordance with knowledge/skills/judgment, applicable laws and regulations, and organization policies. The RDN collaborates with or refers to other health care professionals and resources. The nutrition intervention/plan of care is ultimately the responsibility of the RDN.

Indicators for Standard 3: Nutrition Intervention/Plan of Care					
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
Plans the Nutrition Intervention/Plan of Care:					
3.1	**Addresses the nutrition diagnosis(es) by determining and prioritizing appropriate interventions for the plan of care**		**X**	**X**	**X**
	Prioritization considerations may include:				
	3.1A	Readiness of the patient/client to receive selected nutrition interventions	X	X	X
	3.1B	Cognitive, physical, developmental, and behavioral readiness to benefit from interventions	X	X	X
	3.1C	Transitions of care needs/plans; seeks assistance if needed	X	X	X
	3.1D	Immediacy of the problem and severity of nutrition risk or malnutrition, if present		X	X
	3.1E	Emerging therapies or nontraditional intervention(s) to achieve intended outcome(s) (eg, assessing functional, nutritional, and systems laboratory markers, referral to interprofessional functional practitioners for specialty and/or spine- and joint-related therapies* to support optimizing nutritional metabolism)		X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 3: Nutrition Intervention/Plan of Care					
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
3.2	**Bases intervention/plan of care on best available research/evidence and information, evidence-based guidelines, and best practices**		**X**	**X**	**X**
	3.2A	Considers available practice guidelines for patient's/client's diseases/conditions when determining complementary NIFM interventions (eg, Natural Medicines Database, Academy Evidence Analysis Library, or applicable focus area Standards of Practice and Standards of Professional Performance)	X	X	X
	3.2B	Uses professional judgment that draws from scientific literature, practice experience, treatments for medical conditions, when applicable, and the nutrition status of the individual in developing an intervention plan; seeks assistance from experienced practitioner if needed	X	X	X
	3.2C	Recognizes when it is appropriate and safe to deviate from established nutrition guidelines and evidence supported NIFM practices		X	X
3.3	**Refers to policies and procedures, protocols, and program standards**		**X**	**X**	**X**
3.4	**Collaborates with patient/client/advocate/population, caregivers, interprofessional team, and other health care professionals**		**X**	**X**	**X**
	3.4A	Recognizes specific knowledge and skills of the patient/client and of other providers in developing interventions/plan of care	X	X	X
	3.4B	Organizes care in collaboration with patient/client, caregiver, or advocate, and with the interprofessional team		X	X
	3.4C	Facilitates the collaborative process with interprofessional team members and other providers, when applicable, in planning the intervention			X
	3.4D	Serves as a resource to other practitioners and the interprofessional team on incorporating NIFM into treatment approaches for patients/clients with complex medical conditions			X
	3.4E	Directs integration of IFMNT with nutrition management of long-term complications within the context of integrated care (eg, high-risk pregnancy, renal failure, heart failure, surgery, long-term enteral nutrition) in consultation with interprofessional team or other applicable providers			X
3.5	**Works with patient/client/population, advocate, and caregivers to identify goals, preferences, discharge/transitions of care needs, plan of care, and expected outcomes**		**X**	**X**	**X**
	3.5A	Intervention plan considerations may include but are not limited to: • patient's/client's/family's/advocate's goals, expectations, skills, and resources • interventions to address issues that include achieving and maintaining wellness • barriers to successful outcomes	X	X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 3: Nutrition Intervention/Plan of Care					
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
	3.5B	Develops goals, outcomes, and plan(s) for monitoring through shared decision making with patient/client/advocate using clear, concise, and measurable terms	X	X	X
	3.5C	Identifies strategies to address lapses in self-care management or behaviors and recovery options through shared decision making		X	X
3.6	**Develops the nutrition prescription and establishes measurable patient-/client-focused goals to be accomplished**		**X**	**X**	**X**
	3.6A	Develops or adjusts the nutrition prescription and intervention plan considering: • medical conditions, food restrictions and intolerances, and treatment goals • nutrition diagnosis(es)-priority • physical activity and work schedule, if applicable • medications and dietary supplements* • educational needs, including health literacy and numeracy • cultural, religious, and other influences and/or beliefs • food access and preparation skills • psychological and behavioral factors influencing medical management and support (eg, depression, autism spectrum disorders, substance use disorders, eating disorders) • lifestyle (eg, stress management, sleep) • environmental exposures (eg, exposure to pollutants)	X	X	X
	3.6B	Identifies nutrient needs throughout the lifespan beyond BMI and calories by considering nutrient insufficiencies, bowel health, and NFPE findings	X	X	X
	3.6C	Offers general physical activity and lifestyle recommendations for health and fitness based on published evidence-based population-specific positions and guidelines	X	X	X
	3.6D	Selects specific intervention and monitoring strategies for each of the priorities identified that are focused on the etiology of the core problem, and guided by prior practice and professional experience		X	X
	3.6E	Considers use of dietary supplements* (including herbal/botanical therapy) throughout the lifecycle (eg, preconception through end of life) consistent with current guidelines (eg, Dietary Reference Intakes, safety, rules and regulations for specific populations [eg, athletes])		X	X
3.7	**Defines time and frequency of care including intensity, duration, and follow-up**		**X**	**X**	**X**
	3.7A	Identifies time and frequency for ordering and monitoring results of diagnostic tests or procedures, and laboratory tests based on patient/client needs, established goals and outcomes, and expected response to intervention(s) reflecting organization/program policies and/or regulations when applicable		X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 3: Nutrition Intervention/Plan of Care					
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
3.8	**Uses standardized terminology for describing interventions**		**X**	**X**	**X**
	3.8A	Uses standardized eNCPT (eg, vitamin and mineral supplement therapy, bioactive substance management, complementary/alternative medicine) and other integrative and functional terms (eg, methylation,* organic acids,* nutritional genomics,* biotransformation and elimination*) to describe interventions		X	X
3.9	**Identifies resources and referrals needed**		**X**	**X**	**X**
	3.9A	Identifies resources to assist patient/client/advocate in using educational services and community programs appropriately (eg, support groups, health care services, meal programs, recommended websites)	X	X	X
	3.9B	Understands the role of various disciplines in integrative and functional medicine (eg, naturopathy, herbology, massage therapy, Ayurveda*) to facilitate appropriate referrals as needed		X	X
Implements the Nutrition Intervention/Plan of Care:					
3.10	**Collaborates with colleagues, interprofessional team, and other health care professionals**		**X**	**X**	**X**
	3.10A	Provides ongoing follow-up documentation to referring physician or other provider(s), for collaboration and concurrence on IFMNT plan of care, use of dietary supplements,* and other recommended therapies (eg, meditation, massage)	X	X	X
	3.10B	Coordinates the NIFM-related activities of the patient/client plan of care on behalf of the interprofessional team		X	X
	3.10C	Facilitates and fosters active communication, learning partnerships, and collaboration with the interprofessional team or with other providers/consultants		X	X
	3.10D	Seeks opportunities to collaborate and share information that supports the integration of NIFM with other conventional/traditional medical approaches to care, particularly when treatment results are not being achieved			X
3.11	**Communicates and coordinates the nutrition intervention/plan of care**		**X**	**X**	**X**
	3.11A	Ensures that patient/client and, as appropriate, family/advocate/caregivers, understand and can articulate goals and other aspects of the plan of care	X	X	X
	3.11B	Collaborates with interprofessional team or other health care provider(s) to facilitate coordination of care and awareness of potentially conflicting/problematic treatments (eg, medication-dietary supplement* interactions)		X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 3: Nutrition Intervention/Plan of Care							
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators					**The "X" signifies the indicators for the level of practice**		
Each RDN:					**Competent**	**Proficient**	**Expert**
3.12	**Initiates the nutrition intervention/plan of care**				**X**	**X**	**X**
	3.12A	**Uses approved clinical privileges, physician/non-physician practitioner[e]-driven orders (ie, delegated orders), protocols, or other facility-specific processes for order writing or for provision of nutrition-related services consistent with applicable specialized training, competence, medical staff, and/or organizational policy**			**X**	**X**	**X**
		3.12A1	**Implements, initiates, or modifies orders for therapeutic diet, nutrition-related pharmacotherapy management, or nutrition-related services (eg, medical foods/nutrition/dietary supplements,* food texture modifications, enteral and parenteral nutrition, intravenous fluid infusions, laboratory tests, medications, and education and counseling)**		**X**	**X**	**X**
			3.12A1i	Initiates, modifies, or manages laboratory and diagnostic testing, orders for medical foods or dietary supplements,* and referrals to integrative therapies (eg, meditation, massage) based on privileges, delegated orders, or physician-approved protocols		X	X
		3.12A2	**Manages nutrition support therapies (eg, formula selection, rate adjustments, addition of designated medications and vitamin/mineral supplements to parenteral nutrition solutions or supplemental water for enteral nutrition)**		**X**	**X**	**X**
			3.12A2i	Provides education and counseling on the use of prescribed and over-the-counter dietary supplements* for safety to minimize food—nutrient—medication interactions and interactions with treatments (eg, chemotherapy)		X	X
		3.12A3	**Initiates and performs nutrition-related services (eg, bedside swallow screenings, inserting and monitoring nasoenteric feeding tubes, and indirect calorimetry measurements, or other permitted services)**		**X**	**X**	**X**
	3.12B	Uses appropriate behavior change theories (eg, motivational interviewing, behavior modification, modeling) to facilitate IFMNT interventions			X	X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 3: Nutrition Intervention/Plan of Care					
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
	3.12C	Identifies tools for nutrition education to support the intervention/plan of care that are appropriate to the patient's/client's and/or family's/advocate's educational needs, learning style, and method of communication; uses interpersonal teaching, training, coaching, counseling, or technological approaches, as appropriate	X	X	X
	3.12D	Tailors nutrition and lifestyle interventions to the developmental and cognitive functioning of the patient/client based on the NIFM systems nutritional assessment, making changes to the intervention as appropriate		X	X
	3.12E	Draws on experiential and science-/research-informed knowledge about the patient/client population to individualize the strategies for complex and dynamic situations			X
3.13	**Assigns activities to NDTR and other professional, technical, and support personnel in accordance with qualifications, organizational policies/protocols, and applicable laws and regulations**		**X**	**X**	**X**
	3.13A	**Supervises professional, technical, and support personnel**	**X**	**X**	**X**
	3.13B	Provides professional, technical, and support personnel with information and guidance needed to complete assigned activities	X	X	X
3.14	**Continues data collection**		**X**	**X**	**X**
	3.14A	Identifies and records specific data collection for patient/client, including weight change, biochemical, behavioral, and lifestyle factors using prescribed/standardized format	X	X	X
3.15	**Documents:**				
	3.15A	**Date and time**	**X**	**X**	**X**
	3.15B	**Specific and measurable treatment goals and expected outcomes**	**X**	**X**	**X**
	3.15C	**Recommended interventions**	**X**	**X**	**X**
	3.15D	**Patient/client/advocate/caregiver/community receptiveness**	**X**	**X**	**X**
	3.15E	**Referrals made, and resources used**	**X**	**X**	**X**
	3.15F	**Patient/client/advocate/caregiver/community comprehension**	**X**	**X**	**X**
	3.15G	**Barriers to change**	**X**	**X**	**X**
	3.15H	**Other information relevant to providing care and monitoring progress over time**	**X**	**X**	**X**
	3.15I	**Plans for follow-up and frequency of care**	**X**	**X**	**X**
	3.15J	**Rationale for discharge or referral if applicable**	**X**	**X**	**X**

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Examples of Outcomes for Standard 3: Nutrition Intervention/Plan of Care

- Goals and expected outcomes are appropriate and prioritized
- Patient/client/advocate/population, caregivers, and interprofessional teams collaborate and are involved in developing nutrition intervention/plan of care
- Appropriate individualized patient-/client-centered nutrition intervention/plan of care, including nutrition prescription, is developed
- Nutrition intervention/plan of care is delivered, and actions are carried out as intended
- Discharge planning/transitions of care needs are identified and addressed
- Documentation of nutrition intervention/plan of care is:
  - Specific
  - Measurable
  - Attainable
  - Relevant
  - Timely
  - Comprehensive
  - Accurate
  - Dated and timed

Standard 4: Nutrition Monitoring and Evaluation

The registered dietitian nutritionist (RDN) monitors and evaluates indicators and outcomes data directly related to the nutrition diagnosis, goals, preferences, and intervention strategies to determine the progress made in achieving desired results of nutrition care and whether planned interventions should be continued or revised.

Rationale:

Nutrition monitoring and evaluation are essential components of an outcomes management system in order to assure quality, patient-/client-/population-centered care and to promote uniformity within the profession in evaluating the efficacy of nutrition interventions. Through monitoring and evaluation, the RDN identifies important measures of change or patient/client/population outcomes relevant to the nutrition diagnosis and nutrition intervention/plan of care; describes how best to measure these outcomes; and intervenes when intervention/plan of care requires revision.

Indicators for Standard 4: Nutrition Monitoring and Evaluation						
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
4.1	**Monitors progress:**			**X**	**X**	**X**
	4.1A	**Assesses patient/client/advocate/population understanding and compliance with nutrition intervention/plan of care**		**X**	**X**	**X**
		4.1A1	Identifies existing tools and methods to improve understanding of and/or adherence to plan as needed, based on the patient's/client's/advocate's specific needs and situations	X	X	X
		4.1A2	Determines whether barriers to understanding are present and impacting the patient's/client's/advocate's compliance with the nutrition intervention/plan of care		X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 4: Nutrition Monitoring and Evaluation						
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
	4.1B	**Determines whether the nutrition intervention/plan of care is being implemented as prescribed**		**X**	**X**	**X**
		4.1B1	Monitors progress or reasons for lack of progress related to problems and interventions	X	X	X
		4.1B2	Tailors tools and methods to ensure desired outcomes reflect the patient's/client's social, physical, environmental factors, nutrition goals, and support engagement in the interventions		X	X
		4.1B3	Evaluates nutrition intervention in the face of complex clinical situations (eg, non-healing wounds, pre- and post-metabolic/bariatric surgery, multiple comorbid conditions, food allergies and intolerances, and cultural factors)			X
4.2	**Measures outcomes:**			**X**	**X**	**X**
	4.2A	**Selects the standardized nutrition care measurable outcome indicator(s)**		**X**	**X**	**X**
		4.2A1	Considers patient-/client-centered outcomes (eg, quality of life, physical well-being, anthropometric, laboratory, and behavioral measures, and patient/client/advocate satisfaction)	X	X	X
	4.2B	**Identifies positive or negative outcomes, including impact on potential needs for discharge/transitions of care**		**X**	**X**	**X**
		4.2B1	Documents progress in meeting goals and desired clinical and lifestyle outcomes	X	X	X
		4.2B2	Monitors and evaluates physiologic response of patient/client to recommended whole foods, functional foods,* medical foods, dietary supplements,* low glycemic index foods, and/or anti-inflammatory foods		X	X
		4.2B3	Identifies unintended consequences (eg, excessive rate of weight loss, blood sugar variability), or the patient's/client's use of inappropriate methods of achieving goals (eg, medications and/or dietary supplements* erratic use/noncompliance, self-imposed dietary restrictions, and personal beliefs)		X	X
		4.2B4	Addresses underlying factors interfering with meeting nutrition intervention goals (eg, access to resources, lack of insurance, cost of medications or dietary supplements*)		X	X
4.3	**Evaluates outcomes:**			**X**	**X**	**X**
	4.3A	**Compares monitoring data with nutrition prescription and established goals or reference standard**		**X**	**X**	**X**

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 4: Nutrition Monitoring and Evaluation						
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
		4.3A1	Compares genomic testing* results, functional laboratory data* with nutrition prescription/goals or reference standards		X	X
		4.3A2	Considers impact of the intervention on biomarkers* collected (eg, laboratory values, body composition changes, imaging [eg, bone density])		X	X
	4.3B	**Evaluates impact of the sum of all interventions on overall patient/client/population health outcomes and goals**		**X**	**X**	**X**
		4.3B1	Evaluates the patient/client variance from planned outcomes and incorporates findings into future individualized treatment recommendations	X	X	X
	4.3C	**Evaluates progress or reasons for lack of progress related to problems and interventions**		**X**	**X**	**X**
		4.3C1	Communicates and consults with patient/client/advocate/other health care provider(s) as needed or with informed consent by the patient/client/advocate	X	X	X
		4.3C2	Uses multiple resources to assess progress (eg, NFPE, laboratory and other clinical data, changes in body weight/body composition, pertinent medications/dietary supplements*) relative to effectiveness of the care plan		X	X
		4.3C3	Follows changes in core clinical balances* via diagnostic tests and signs and symptoms to monitor need for alterations in intervention strategies		X	X
		4.3C4	Identifies problems and barriers that are interfering with the interventions and recommends appropriate adjustments or referrals			X
	4.3D	**Evaluates evidence that the nutrition intervention/plan of care is maintaining or influencing a desirable change in the patient/client/population behavior or status**		**X**	**X**	**X**
		4.3D1	Determines patient/client/advocate understanding and adherence to nutrition-lifestyle intervention by observing progress toward or meeting goals	X	X	X
		4.3D2	Initiates interprofessional team or referring practitioner consultation to review monitoring data and outcomes of interventions to identify next steps for interventions		X	X
	4.3E	**Supports conclusions with evidence (eg, anthropometric, biochemical, clinical, and dietary data)**		**X**	**X**	**X**
		4.3E1	Clearly documents processes and outcomes	X	X	X

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Indicators for Standard 4: Nutrition Monitoring and Evaluation					
Bold Font Indicators are Academy Core RDN Standards of Practice Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
4.4	**Adjusts nutrition intervention/plan of care strategies, if needed, in collaboration with patient/client/population/advocate/caregiver and interprofessional team**		**X**	**X**	**X**
	4.4A	**Improves or adjusts intervention/plan of care strategies based upon outcomes data, trends, best practices, and comparative standards**	**X**	**X**	**X**
	4.4B	Modifies intervention strategies as needed (eg, considering culture, psychosocial, change in living/care situation, progress/change in goal, change in health status parameters); seeks assistance as needed	X	X	X
	4.4C	Modifies intervention strategies as appropriate to address patient/client needs, new/emerging situations (such as comorbidities and complications), and results of any further functional or other testing		X	X
	4.4D	Arranges for additional integrative and functional resources/avenues of therapy (eg, chiropractic, Ayurveda,* massage, acupuncture, naturopathy) to support the intervention plan in meeting desired patient/client outcomes in consultation with interprofessional team, as needed		X	X
	4.4E	Adjusts intervention strategies by drawing on practice experience, knowledge, clinical judgement, and research-/evidence-based practice about the patient/client populations in complicated and unpredictable situations			X
4.5	**Documents:**		**X**	**X**	**X**
	4.5A	**Date and time**	**X**	**X**	**X**
	4.5B	**Indicators measured, results, and the method for obtaining measurement**	**X**	**X**	**X**
	4.5C	**Criteria to which the indicator is compared (eg, nutrition prescription/goal or a reference standard)**	**X**	**X**	**X**
	4.5D	**Factors facilitating or hampering progress**	**X**	**X**	**X**
	4.5E	**Other positive or negative outcomes**	**X**	**X**	**X**
	4.5F	**Adjustments to the nutrition intervention/plan of care, if indicated**	**X**	**X**	**X**
	4.5G	**Future plans for nutrition care, nutrition monitoring and evaluation, follow-up, referral, or discharge**	**X**	**X**	**X**

Examples of Outcomes for Standard 4: Nutrition Monitoring and Evaluation

- The patient/client/community outcome(s) directly relate to the nutrition diagnosis and the goals established in the nutrition intervention/plan of care. Examples include, but are not limited to:
  - Nutrition outcomes (eg, change in signs and symptoms, food or nutrient intake, and improvement in knowledge or behavior)
  - Clinical and health status outcomes (eg, change in laboratory values, body weight, blood pressure, risk factors, clinical status, infections, complications, morbidity, and mortality)

(continued on next page)

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

- Patient-/client-/population-centered outcomes (eg, quality of life, satisfaction, self-efficacy, self-management, functional ability)
- Health care utilization and cost effectiveness outcomes (eg, change in medication, special procedures, planned/unplanned clinic visits, preventable hospital admissions, length of hospitalizations, prevented or delayed nursing home admissions, morbidity, and mortality)

- Nutrition intervention/plan of care and documentation is revised, if indicated
- Documentation of nutrition monitoring and evaluation is:
  - Specific
  - Measurable
  - Attainable
  - Relevant
  - Timely
  - Comprehensive
  - Accurate
  - Dated and Timed

Editor's note: An asterisk (*) denotes terms that can be found in the Glossary of Terms, which is published with the Academy of Nutrition and Dietetics: Revised 2019 Standards of Practice and Standards of Professional Performance (Competent, Proficient, Expert) for Registered Dietitian Nutritionists in Nutrition in Integrative and Functional Medicine article.

[a]**Interprofessional**: The term *interprofessional* is used in this evaluation resource as a universal term. It includes a diverse group of team members (eg, physicians, naturopathic doctors, physician assistants, chiropractors, nurses, dietitian nutritionists, pharmacists, massage therapists), depending on the needs of the patient/client. Interprofessional could also mean interdisciplinary or multidisciplinary.

[b]**Nutrition in integrative and functional medicine (NIFM):** *Nutrition in integrative and functional medicine* reflects both integrative and functional medicine, which encompass a patient-/client-centered, healing-oriented approach that embraces conventional and complementary therapies.[1] RDNs practicing NIFM provide nutrition care and services by performing a systems assessment (biological, clinical, and lifestyle) to develop a plan of care; and evaluating physical, social, lifestyle, and environmental factors that influence interactions between the mind, body, and spirit.[12,13] NIFM encompasses *integrative and functional medical nutrition therapy*, a term used by the Dietitians in Integrative and Functional Medicine Dietetic Practice Group to identify medical nutrition therapy that incorporates both integrative and functional medicine principles with conventional nutrition practices for chronic disease conditions and some acute conditions (eg, cancer, arthritis, cardiovascular, or neurodegenerative diseases). RDNs in NIFM may work in private practice, as part of an integrative and functional medicine health care team or practice, as faculty in nutrition and dietetics education programs, in research, and other settings.

[c]**Advocate:** An *advocate* is a person who provides support and/or represents the rights and interests at the request of the patient/client. The person may be a family member or an individual not related to the patient/client who is asked to support the patient/client with activities of daily living or is legally designated to act on behalf of the patient/client, particularly when the patient/client has lost decision making capacity. (Adapted from definitions within The Joint Commission Glossary of Terms[14] and the Centers for Medicare and Medicaid Services, Hospital Conditions of Participation[6]).

[d]**Shared decision making**: *Shared decision making* is a process and approach describing the communication between clinician(s) and patients/clients/advocates to make choices and decisions about an individual's care using the best available evidence.[15-17]

[e]**Non-physician practitioner**: A *non-physician practitioner* may include a physician assistant, nurse practitioner, clinical nurse specialist, certified registered nurse anesthetist, certified nurse-midwife, clinical social worker, clinical psychologist, anesthesiologist's assistant, and qualified dietitian or qualified nutrition professional. Disciplines considered for privileging by a facility's governing body and medical staff must be in accordance with state law.[6,7] The term *privileging* is not referenced in the Centers for Medicare and Medicaid Services long-term care (LTC) regulations. With publication of the Final Rule revising the Conditions of Participation for LTC facilities effective November 2016, post-acute care settings, such as skilled and LTC facilities, may now allow a resident's attending physician the option of delegating order writing for therapeutic diets, nutrition supplements or other nutrition-related services to the qualified dietitian or clinically qualified nutrition professional, if consistent with state law, and organization policies.[9,10]

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The terms *patient, client, customer, individual, person, participant, group or population* are used interchangeably with the actual term used in a given situation, depending on the setting and the population receiving care or services.

Standards of Professional Performance for Registered Dietitian Nutritionists in Nutrition in Integrative and Functional Medicine (NIFM)

Standard 1: Quality in Practice

The registered dietitian nutritionist (RDN) provides quality services using a systematic process with identified ethics, leadership, accountability, and dedicated resources.

Rationale:

Quality practice in nutrition and dietetics is built on a solid foundation of education and supervised practice, credentialing, evidence-based practice, demonstrated competence, and adherence to established professional standards. Quality practice requires systematic measurement of outcomes, regular performance evaluations, and continuous improvement.

Indicators for Standard 1: Quality in Practice					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
1.1	**Complies with applicable laws and regulations as related to his/her area(s) of practice (eg, local, regional, state, and federal)**		**X**	**X**	**X**
	1.1A	Complies with state licensure or certification laws and regulations, if applicable, including telehealth and continuing education requirements	X	X	X
1.2	**Performs within individual and statutory scope of practice and applicable laws and regulations**		**X**	**X**	**X**
	1.2A	Follows any scope of practice requirements related to additional credentialing or position (eg, Certified Health Education Specialist, Certified Diabetes Educator)	X	X	X
1.3	**Adheres to sound business and ethical billing practices applicable to the role and setting**		**X**	**X**	**X**
	1.3A	Assures ethical and accurate reporting of NIFM[a] services (eg, billing codes for payer, group, or individual visit); and compliance with contracts or funder requirements, when applicable	X	X	X
1.4	**Uses national quality and safety data (eg, National Academies of Sciences, Engineering, and Medicine: Health and Medicine Division, National Quality Forum, Institute for Healthcare Improvement, Good Manufacturing Practices of dietary supplements*) to improve the quality of services provided and to enhance customer-centered services**		**X**	**X**	**X**
1.5	**Uses a systematic performance improvement model that is based on practice knowledge, evidence, research, and science for delivery of the highest quality services**		**X**	**X**	**X**
	1.5A	Identifies and participates in using an appropriate organization-approved performance improvement model(s)/processes (eg, Six Sigma, LEAN Thinking)	X	X	X
	1.5B	Uses the scientific method to collect, analyze, and interpret data and evaluate outcomes within the NIFM research literature		X	X

(continued on next page)

Figure 2. Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 1: Quality in Practice						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
	1.5C	Assists in designing performance improvement programs that use evidence-based evaluation protocols to evaluate effectiveness of services			X	X
	1.5D	Selects criteria for data collection, and advocates for and participates in the development of data collection tools (eg, clinical, operational, and financial)			X	X
	1.5E	Uses collected data to facilitate improved outcomes and quality of care and services			X	X
	1.5F	Develops implementation strategies and leads quality improvement activities (eg, identification/adaptions of evidence-based practice guidelines/protocols, skills training/reinforcement, organizational support/incentives)				X
	1.5G	Directs the development, management, monitoring, and evaluation of quality improvement activities addressing NIFM practice				X
1.6	**Participates in or designs an outcomes-based management system to evaluate safety, effectiveness, quality, person-centeredness, equity, timeliness, and efficiency of practice**			**X**	**X**	**X**
	1.6A	**Involves colleagues and others, as applicable, in systematic outcomes management**		**X**	**X**	**X**
		1.6A1	Participates in interprofessional[b] efforts to improve NIFM outcomes	X	X	X
		1.6A2	Engages community members, funders, and applicable stakeholders in developing and monitoring outcomes-based management systems		X	X
	1.6B	**Defines expected outcomes**		**X**	**X**	**X**
	1.6C	**Uses indicators that are specific, measurable, attainable, realistic, and timely (S.M.A.R.T.)**		**X**	**X**	**X**
		1.6C1	Identifies and promotes use of evidence-based evaluation criteria applicable to NIFM	X	X	X
		1.6C2	Relates program outcomes to multilevel outcomes (eg, organization, program, and/or individual outcomes/needs)		X	X
	1.6D	**Measures quality of services in terms of structure, process, and outcomes**		**X**	**X**	**X**
		1.6D1	Collects data to evaluate, improve, and document outcomes and services	X	X	X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 1: Quality in Practice						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
		1.6D2	Considers short, medium, and long-term outcomes, including cost-effectiveness, collaborating with interprofessional team and others		X	X
		1.6D3	Monitors and evaluates data against expected outcomes; adjusts processes based on results		X	X
		1.6D4	Leads in educating and mentoring practitioners in measuring NIFM processes to determine effectiveness			X
		1.6D5	Initiates and/or facilitates the development and evaluation of processes and outcomes			X
	1.6E	**Incorporates electronic clinical quality measures to evaluate and improve care of patients/clients at risk for malnutrition or with malnutrition** (www.eatrightpro.org/emeasures)		**X**	**X**	**X**
		1.6E1	Collects data using clinical quality measures applicable to population and setting (eg, screening timeframes, number at risk or with malnutrition and services provided [eg, nutrition assessment, nutrition and/or dietary supplements,* nutrition counseling])		X	X
	1.6F	**Documents outcomes and patient reported outcomes (eg, PROMIS[c])**		**X**	**X**	**X**
		1.6F1	Engages interprofessional partners, including the community, in documenting outcomes and impact		X	X
	1.6G	**Participates in, coordinates, or leads program participation in local, regional, or national registries and data warehouses used for tracking, benchmarking, and reporting service outcomes**		**X**	**X**	**X**
1.7	**Identifies and addresses potential and actual errors and hazards in provision of services or brings to attention of supervisors and team members as appropriate**			**X**	**X**	**X**
	1.7A	Recognizes potential drug—nutrient interactions, drug—food—medical food—herb—dietary supplement* safety and interactions, and potential interactions between interventions and other therapies as potential hazards; provides education and counseling as appropriate		X	X	X
	1.7B	Keeps up-to-date on current findings regarding dietary supplements* (eg, Natural Medicine Database [http://naturaldatabase.therapeuticresearch.com/home.aspx], MedWatch [https://www.fda.gov/Safety/MedWatch/default.htm], Nutrition.gov: Dietary Supplements [https://www.nutrition.gov/subject/dietary-supplements]), and food safety (https://www.foodsafety.gov/)		X	X	X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 1: Quality in Practice					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
	1.7C	Recognizes potential issues with respect to toxins in foods, food packaging, and preparation methods (eg, US Food and Drug Administration Food Guidance and Regulation [https://www.fda.gov/Food/GuidanceRegulation/])	X	X	X
	1.7D	Addresses dietary supplement products and manufacturing practices, quality control, error prevention recommendations (eg, as provided by Institute for Safe Medication Practices [www.ISMP.org], US Food and Drug Administration, United States Pharmacopeia [www.usp.org]), and provides education and counseling as appropriate		X	X
	1.7E	Addresses sports/dietary supplement products to ensure compliance with anti-doping rules and regulations of sports organizations and governing bodies when counseling athletes, or members of the military (US Anti-Doping Agency [http://www.usada.org/supplement411]; Operation Supplement Safety [https://www.opss.org/prohibited-department-defense]); refer to the Standards of Practice and Standards of Professional Performance for RDNs in Sports Nutrition and Dietetics (www.eatrightpro.org/sop) and Position of the Academy, Dietitians of Canada, and the American College of Sports Medicine: Nutrition and Athletic Performance (2016) (https://www.eatrightpro.org/positions)		X	X
	1.7F	Develops protocols to identify, address, and prevent errors and hazards in the delivery of NIFM			X
1.8	**Compares actual performance to performance goals (ie, Gap Analysis, SWOT Analysis [Strengths, Weaknesses, Opportunities, and Threats], PDCA Cycle [Plan-Do-Check-Act], DMAIC [Define, Measure, Analyze, Improve, Control])**		**X**	**X**	**X**
	1.8A	**Reports and documents action plan to address identified gaps in care and/or service performance**	**X**	**X**	**X**
	1.8B	Compares individual performance to self-directed goals and expected outcomes and improvement recommendations and disseminates findings	X	X	X
	1.8C	Compares department/organization performance to goals and expected outcomes to identify improvement recommendations/actions in collaboration with the interprofessional team or other stakeholders		X	X
	1.8D	Benchmarks department/organization performance with national programs and standards			X
1.9	**Evaluates interventions and workflow process(es) and identifies service and delivery improvements**		**X**	**X**	**X**

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 1: Quality in Practice					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
	1.9A	Engages patients/clients/advocates[d] in intervention evaluations (eg, patient satisfaction surveys) to identify service and delivery improvements	X	X	X
	1.9B	Applies performance improvement and research data to NIFM practice to improve effectiveness and efficiency		X	X
	1.9C	Designs and implements evaluation protocols, analyzes data, and implements improvements			X
1.10	**Improves or enhances patient/client/population care and/or services working with others based on measured outcomes and established goals**		**X**	**X**	**X**
	1.10A	Uses culturally competent group engagement processes to improve and enhance services	X	X	X
	1.10B	Oversees, monitors, ensures consistency, and revises processes and outcomes evaluation efforts to improve services		X	X
	1.10C	Adjusts services based on data and review of most current evidence-based information (eg, Academy Evidence Analysis Library)		X	X
	1.10D	Leads the development and management of systems, processes, and programs that advance best practices and the core values and objectives of NIFM			X
	1.10E	Leads local, state, national, and/or international quality initiative efforts to support goals and best practices in NIFM			X

Examples of Outcomes for Standard 1: Quality in Practice

- Actions are within scope of practice and applicable laws and regulations
- National quality standards and best practices are evident in customer-centered services
- Performance improvement systems specific to program(s)/service(s) are established and updated as needed; are evaluated for effectiveness in providing desired outcomes data and striving for excellence in collaboration with other team members
- Performance indicators are specific, measurable, attainable, realistic, and timely (S.M.A.R.T.)
- Aggregate outcomes results meet pre-established criteria
- Quality improvement results direct refinement and advancement of practice

Standard 2: Competence and Accountability

The registered dietitian nutritionist (RDN) demonstrates competence in and accepts accountability and responsibility for ensuring safe, quality practice and services.

Rationale:

Competence and accountability in practice includes continuous acquisition of knowledge, skills, experience, and judgment in the provision of safe, quality customer-centered service.

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 2: Competence and Accountability						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
2.1	**Adheres to the code(s) of ethics (eg, Academy/Commission on Dietetic Registration (CDR), other organizations, and/or employer code of ethics)**			**X**	**X**	**X**
2.2	**Integrates the Standards of Practice (SOP) and Standards of Professional Performance (SOPP) into practice, self-evaluation, and professional development**			**X**	**X**	**X**
	2.2A	**Integrates applicable focus area(s) SOP and/or SOPP into practice (www.eatrightpro.org/sop)**		**X**	**X**	**X**
	2.2B	Uses the Academy focus area SOP and/or SOPP as guides in developing human resource systems (eg, job descriptions, career ladders, job-related performance competencies, acceptable performance level)			X	X
2.3	**Demonstrates and documents competence in practice and delivery of customer-centered service(s)**			**X**	**X**	**X**
2.4	**Assumes accountability and responsibility for actions and behaviors**			**X**	**X**	**X**
	2.4A	**Identifies, acknowledges, and corrects errors**		**X**	**X**	**X**
	2.4B	Practices in accordance with the goals and objectives of continuous quality improvement		X	X	X
	2.4C	Recognizes strengths and limitations of current information/ research/evidence when making recommendations; seeks assistance if needed		X	X	X
		2.4C1	Develops evidence-based safe interventions for the patient/client population's health conditions to achieve optimal health and personal goals	X	X	X
	2.4D	Evaluates RDNs' in NIFM performance based on level of education, skills, and performance requirements			X	X
2.5	**Conducts self-evaluation at regular intervals**			**X**	**X**	**X**
	2.5A	**Identifies needs for professional development**		**X**	**X**	**X**
		2.5A1	Uses self-assessment tools to evaluate professional knowledge, skill, and practice consistent with best practices and research findings according to level of practice	X	X	X
		2.5A2	Seeks opportunities for professional development consistent with identified needs and career goals	X	X	X
2.6	**Designs and implements plans for professional development**			**X**	**X**	**X**
	2.6A	**Develops plan and documents professional development activities in career portfolio (eg, organizational policies and procedures, credentialing agency[ies])**		**X**	**X**	**X**
		2.6A1	Develops and implements a continuing education plan to maintain or advance practice	X	X	X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 2: Competence and Accountability						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
		2.6A2	Actively pursues NIFM continuing education opportunities locally, regionally, and nationally	X	X	X
		2.6A3	Reviews literature and educational material including, but not limited to, professional peer-reviewed articles, textbook chapters, books, podcasts, and webinars from content experts; consults with experienced RDN in NIFM as needed	X	X	X
2.7	**Engages in evidence-based practice and uses best practices**			**X**	**X**	**X**
	2.7A		Recognizes and uses best available evidence for NIFM, practice setting, and population(s) served (Resource: Dietitians in Integrative and Functional Medicine Dietetic Practice Group Best Available Decision Tool at https://integrativerdtool.org/)	X	X	X
	2.7B		Integrates research findings and evidence into peer-reviewed publications and recommendations for practice		X	X
	2.7C		Mentors others in developing skills in accessing and critically analyzing research for application to practice			X
2.8	**Participates in peer review of others as applicable to role and responsibilities**			**X**	**X**	**X**
	2.8A		Participates in peer-review activities consistent with setting and patient/client population (eg, peer evaluation, peer supervision, clinical chart review, performance evaluations)	X	X	X
	2.8B		Designs and/or leads peer-review process(es); serves on editorial boards for peer-reviewed journals, publishing groups, and professional organizations in NIFM			X
2.9	**Mentors and/or precepts others**			**X**	**X**	**X**
	2.9A		Participates in mentoring entry-level RDNs in NIFM, and serves as a preceptor for nutrition and dietetics students/interns; seeks guidance as needed	X	X	X
	2.9B		Develops mentoring and/or practicum opportunities for RDNs aspiring to reach proficient-level practice and NIFM practitioners (eg, professional development programs, educational and training workshops, webinars, and podcasts)		X	X
	2.9C		Provides expertise and counsel to education programs related to food and nutrition care and services, industry standards, practice guidelines, and practice roles for nutrition and dietetics practitioners in NIFM settings			X
2.10	**Pursues opportunities (education, training, credentials, certifications) to advance practice in accordance with laws and regulations, and requirements of practice setting**			**X**	**X**	**X**

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 2: Competence and Accountability					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
	2.10A	Completes pertinent NIFM-related education and skill development opportunities (eg, Academy Certificate of Training Program: Integrative and Functional Nutrition); see Figure 5	X	X	X
	2.10B	Remains informed on nutrition and dietetics practice-related laws and public policy	X	X	X
	2.10C	Participates in training and continuing education to ensure that patient/client counseling and activities/programs are current, based on evidence, fair, and equitable	X	X	X

Examples of Outcomes for Standard 2: Competence and Accountability

- Practice reflects:
  - Code(s) of ethics (eg, Academy/CDR, other national organizations, and/or employer code of ethics)
  - Scope of Practice, Standards of Practice and Standards of Professional Performance
  - Evidence-based practice and best practices
  - CDR Essential Practice Competencies and Performance Indicators
- Practice incorporates successful strategies for interactions with individuals/groups from diverse cultures and backgrounds
- Competence is demonstrated and documented
- Services provided are safe and customer-centered
- Self-evaluations are conducted regularly to reflect commitment to lifelong learning and professional development and engagement
- Professional development needs are identified and pursued
- Directed learning is demonstrated
- Relevant opportunities (education, training, credentials, certifications) are pursued to advance practice
- CDR recertification requirements are met

Standard 3: Provision of Services

The registered dietitian nutritionist (RDN) provides safe, quality service based on customer expectations, and needs, and the mission, vision, principles, and values of the organization/business.

Rationale:

Quality programs and services are designed, executed, and promoted based on the RDN's knowledge, skills, experience, judgment, and competence in addressing the needs and expectations of the organization/business and its customers.

Indicators for Standard 3: Provision of Services					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
3.1		**Contributes to or leads in development and maintenance of programs/ services that address needs of the customer or target population(s)**	**X**	**X**	**X**

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 3: Provision of Services						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				The "X" signifies the indicators for the level of practice		
Each RDN:				Competent	Proficient	Expert
	3.1A	**Aligns program/service development with the mission, vision, principles, values, and service expectations and outputs of the organization/business**		**X**	**X**	**X**
		3.1A1	Participates in or develops NIFM program/practice in compliance with evidence-based guidelines and best business/management practices; seeks assistance as needed		X	X
		3.1A2	Develops programs keeping in mind organization goals as well as the mission/vision in order to maximize the reach and effectiveness of programs			X
	3.1B	**Uses the needs, expectations, and desired outcomes of the customers/populations (eg, patients/clients, families, community, decision makers, administrators, client organization[s]) in program/service development**		**X**	**X**	**X**
		3.1B1	Participates in NIFM program and service planning (eg, business planning and organization/community program development)	X	X	X
		3.1B2	Integrates anticipated needs, identified goals, and objectives into program development and delivery; engages in long-term strategic planning		X	X
		3.1B3	Leads in strategic and operational planning, implementation, and monitoring of NIFM programs and services			X
	3.1C	**Makes decisions and recommendations that reflect stewardship of time, talent, finances, and environment**		**X**	**X**	**X**
		3.1C1	Shapes, modifies, and adapts program and service delivery in alignment with budget requirements and priorities		X	X
		3.1C2	Emphasizes the application of NIFM principles (see Figure 4) to community environments and population-level programs			X
	3.1D	**Proposes programs and services that are customer-centered, culturally appropriate, and minimize disparities**		**X**	**X**	**X**
		3.1D1	Adapts practice to minimize or eliminate health disparities associated with culture, race, socioeconomic status, age, and other factors	X	X	X
		3.1D2	Uses and collects data to track changes in health disparities and ensure inclusivity, equality, and equity	X	X	X
		3.1D3	Creates messages and opportunities to address social justice and social equity		X	X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 3: Provision of Services						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
3.2	**Promotes public access and referral to credentialed nutrition and dietetics practitioners for quality food and nutrition programs and services**			**X**	**X**	**X**
	3.2A	**Contributes to or designs referral systems that promote access to qualified, credentialed nutrition and dietetics practitioners**		**X**	**X**	**X**
		3.2A1	Ensures that RDNs are part of an interprofessional approach across collaborative programs and efforts	X	X	X
		3.2A2	Participates in developing referral tools and processes	X	X	X
		3.2A3	Creates policies and practices that support a strong safety net for patients/clients and populations		X	X
		3.2A4	Directs and manages referral process and systems including establishing agreements and developing/modifying referral systems with health and community partners			X
	3.2B	**Refers customers to appropriate providers when requested services or identified needs exceed the RDN's individual scope of practice (eg, specialist RDNs, medical and naturopathic physicians, mental/behavioral health professionals, chiropractors, exercise professionals, and alternative therapeutic modalities [massage therapists, acupuncturists])**		**X**	**X**	**X**
		3.2B1	Verifies potential referral provider's care reflects evidence-based information/research and professional standards of practice	X	X	X
		3.2B2	Establishes and maintains networks to support overall care of patients/clients		X	X
		3.2B3	Supports referral sources with curriculum and training regarding needs of patients/clients/population(s)		X	X
	3.2C	**Monitors effectiveness of referral systems and modifies as needed to achieve desirable outcomes**		**X**	**X**	**X**
		3.2C1	Collects and/or uses data to track effectiveness and revise referral process and systems		X	X
		3.2C2	Shares aggregate referral data and related outcomes of referrals with stakeholders		X	X
		3.2C3	Audits, evaluates, and revises conventional nutrition and NIFM referral processes for efficiency and effectiveness			X
3.3	**Contributes to or designs customer-centered services**			**X**	**X**	**X**
	3.3A	**Assesses needs, beliefs/values, goals, resources of the customer, and social determinants of health**		**X**	**X**	**X**

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 3: Provision of Services						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
		3.3A1	Develops targeted, tailored, and/or personalized services based on needs assessments and cultural norms	X	X	X
		3.3A2	Conducts needs assessment in partnership with organization leaders, interprofessional team members, individuals and community stakeholders		X	X
		3.3A3	Applies patient/client population values, goals, and needs to the design and delivery of NIFM services		X	X
	3.3B	**Uses knowledge of the customer's/target population's health conditions, cultural beliefs, and business objectives/services to guide design and delivery of customer-centered services**		**X**	**X**	**X**
		3.3B1	Tailors interventions based on health behavior theory (ie, stages of change, socio-ecological model)	X	X	X
		3.3B2	Adapts program/service practices to meet the needs of an ethnically and culturally diverse NIFM population		X	X
	3.3C	**Communicates principles of disease prevention and behavioral change appropriate to the customer or target population**		**X**	**X**	**X**
		3.3C1	Communicates the relationship between food, environment/ systems, genetics, and behavior in disease prevention as the foundation for nutrition education, programs, and prevention approaches; seeks assistance as needed	X	X	X
		3.3C2	Develops knowledge of the elements of the Integrative and Functional Medical Nutrition Therapy (IFMNT) Radial conceptual diagram and application to practice (see Figure 7)	X	X	X
	3.3D	**Collaborates with the customers to set priorities, establish goals, and create customer-centered action plans to achieve desirable outcomes**		**X**	**X**	**X**
	3.3E	**Involves customers in decision making (eg, NIFM program/services)**		**X**	**X**	**X**
3.4	**Executes programs/services in an organized, collaborative, cost-effective, and customer-centered manner**			**X**	**X**	**X**
	3.4A	**Collaborates and coordinates with peers, colleagues, stakeholders, and within interprofessional teams**		**X**	**X**	**X**
		3.4A1	Works within interprofessional team for education/skill development and to demonstrate role of RDN and nutrition, incorporating NIFM principles	X	X	X
		3.4A2	Collaborates, as part of an interprofessional team, with organization and community programming, resources, services, and referrals as needed	X	X	X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 3: Provision of Services						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
		3.4A3	Consults and provides expertise with partners to ensure evidence-based nutrition services across the lifespan (eg, child care, schools, senior programs)		X	X
	3.4B	**Uses and participates in, or leads in the selection, design, execution, and evaluation of customer programs and services (eg, nutrition screening system, medical and retail foodservice, electronic health records, interprofessional programs, community education, and grant management)**		**X**	**X**	**X**
		3.4B1	Incorporates standards for NIFM care based on evidence-based guidelines and recommendations in the design of programs and services; seeks assistance if needed	X	X	X
		3.4B2	Participates in or develops nutrition screening process (eg, who, when, form[s], guidelines on screening parameters to use [eg, anthropometrics, medications/dietary supplements* used]), documentation, and follow-up steps	X	X	X
		3.4B3	Evaluates the effectiveness of nutrition screening tools using established guidelines, recommendations, and research		X	X
		3.4B4	Manages delivery of NIFM care and services as an active participant in interprofessional teams		X	X
		3.4B5	Evaluates the appropriateness and validity of emerging NIFM screening tools			X
		3.4B6	Develops and manages NIFM programs and services in keeping with evidenced-based research			X
	3.4C	**Uses and develops or contributes to selection, design, and maintenance of policies, procedures (eg, discharge planning/ transitions of care), protocols, standards of care, technology resources (eg, Health Insurance Portability and Accountability Act [HIPAA]—compliant telehealth platforms), and training materials that reflect evidence-based practice in accordance with applicable laws and regulations**		**X**	**X**	**X**
		3.4C1	Directs and/or develops NIFM protocols and policies based on available evidence-based research, national/ international guidelines, best practices as established by current peer-reviewed research, or by organizations with expertise in NIFM (eg, Institute for Functional Medicine, Dietitians in Integrative and Functional Medicine Dietetic Practice Group [DIFM], NIFM-focused organizations and academic institutions)		X	X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 3: Provision of Services							
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators					**The "X" signifies the indicators for the level of practice**		
Each RDN:					**Competent**	**Proficient**	**Expert**
		3.4C2		Leads interprofessional collaboration to translate conventional nutrition and NIFM research and trends into national and international guidelines and best practices to guide safe and quality NIFM care and services			X
	3.4D	**Uses and participates in or develops processes for order writing and other nutrition-related privileges, in collaboration with the medical staff,[e] or medical director (eg, post-acute care settings, dialysis center, public health, community, free-standing clinic settings) consistent with state practice acts, federal and state regulations, organization policies, and medical staff rules, regulations, and bylaws**			**X**	**X**	**X**
		3.4D1		**Uses and participates in or leads development of processes for privileges or other facility-specific processes related to (but not limited to) implementing physician/non-physician practitioner[f]—driven delegated orders or protocols, initiating or modifying orders for therapeutic diets, medical foods/nutrition supplements, dietary supplements,* enteral and parenteral nutrition, laboratory tests, medications, and adjustments to fluid therapies or electrolyte replacements**	**X**	**X**	**X**
			3.4D1i	Adheres to organization-approved provider protocols/delegated orders for including in scope of work: ordering or revising diet, ordering functional laboratory testing, ordering or revising medical food and dietary supplements,* or other nutrition-related orders	X	X	X
			3.4D1ii	Designs, implements, and evaluates food and targeted nutrition-based protocols used with patient/client population, as needed, including the addition of condition-specific products (eg, prebiotics and probiotics for irritable bowel syndrome)		X	X
			3.4D1iii	Collaborates with a pharmacist or interprofessional team in the development of organization and provider-approved pharmacotherapy protocols (eg, monitoring for food—herbal—dietary supplement* and drug interactions)		X	X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 3: Provision of Services						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
		3.4D2	**Uses and participates in or leads development of processes for privileging for provision of nutrition-related services, including (but not limited to) initiating and performing bedside swallow screenings, inserting and monitoring nasoenteric feeding tubes, providing home enteral nutrition or infusion management services (eg, ordering formula and supplies), and indirect calorimetry measurements**	**X**	**X**	**X**
	3.4E	**Complies with established billing regulations, organization policies, grant funder guidelines, if applicable to role and setting, and adheres to ethical and transparent financial management and billing practices**		**X**	**X**	**X**
	3.4F	**Communicates with the interprofessional team and referring party consistent with HIPAA rules for use and disclosure of customer's personal health information**		**X**	**X**	**X**
3.5	**Uses professional, technical, and support personnel appropriately in the delivery of customer-centered care or services in accordance with laws, regulations, and organization policies and procedures**			**X**	**X**	**X**
	3.5A	**Assigns activities, including direct care to patients/clients, consistent with the qualifications, experience, and competence of professional, technical, and support personnel**		**X**	**X**	**X**
		3.5A1	Ensures that all staff or colleagues in other disciplines have adequate training to deliver appropriate nutrition-related services; seek consultation if needed	X	X	X
		3.5A2	Assesses and determines capabilities/expertise of staff working directly with patients/clients to determine tasks that may be delegated		X	X
	3.5B	**Supervises professional, technical, and support personnel**		**X**	**X**	**X**
		3.5B1	Trains professional, technical, and support personnel and evaluates their competence		X	X
3.6	**Designs and implements food delivery systems to meet the needs of customers**			**X**	**X**	**X**
	3.6A	**Collaborates in or leads the design of food delivery systems to address health care needs and outcomes (including nutrition status), ecological sustainability, and to meet the culture and related needs and preferences of target populations (ie, health care patients/clients, employee groups, visitors to retail venues, schools, child and adult day-care centers, community feeding sites, farm to institution initiatives, local food banks)**		**X**	**X**	**X**

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 3: Provision of Services						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
	3.6B	**Participates in, consults/collaborates with, or leads the development of menus to address health, nutritional, and cultural needs of target population(s) consistent with federal, state, or funding source regulations or guidelines**		**X**	**X**	**X**
		3.6B1	Consults and provides guidance to organizations interested in NIFM approach regarding foods to incorporate into menus, snack options, and beverages for the population(s) served		X	X
	3.6C	**Participates in, consults/collaborates with, or leads interprofessional process for determining medical foods/nutritional supplements, dietary supplements,* enteral and parenteral nutrition formularies, and delivery systems for target population(s)**		**X**	**X**	**X**
		3.6C1	Participates in interprofessional process(es) to provide expertise in the selection of medical foods and dietary supplements;* and the development of protocol for monitoring and reporting of food-medical food supplement-dietary supplement,* and drug interactions		X	X
3.7	**Maintains records of services provided**			**X**	**X**	**X**
	3.7A	**Documents according to organization policies, procedures, standards, and systems, including electronic health records**		**X**	**X**	**X**
		3.7A1	Uses and participates in the development/revision of electronic health records applicable to setting	X	X	X
	3.7B	**Implements data management systems to support interoperable data collection, maintenance, and utilization**		**X**	**X**	**X**
		3.7B1	Participates in nutrition surveillance systems applicable to setting	X	X	X
		3.7B2	Develops or collaborates with the interprofessional team to capture NIFM-specific data through electronic health records or other data-collection tools		X	X
		3.7B3	Seeks opportunities to contribute expertise to national bioinformatics/medical informatics projects as applicable/ requested			X
	3.7C	**Uses data to document outcomes of services (ie, staff productivity, cost/benefit, budget compliance, outcomes, quality of services) and provide justification for maintenance or expansion of services**		**X**	**X**	**X**
		3.7C1	Shares program outcomes and impact with organization, patients/clients, or community participants	X	X	X
		3.7C2	Provides structure and systems for staff to create reports to identify program outcomes and gaps		X	X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 3: Provision of Services						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
		3.7C3	Analyzes and uses data to communicate value of conventional nutrition and NIFM services in relation to patient/client population and organization outcomes/goals		X	X
	3.7D	**Uses data to demonstrate program/service achievements and compliance with accreditation standards, laws, and regulations**		**X**	**X**	**X**
3.8	**Advocates for provision of quality food and nutrition services as part of public policy**			**X**	**X**	**X**
	3.8A	**Communicates with policy makers regarding the benefit/cost of quality food and nutrition services**		**X**	**X**	**X**
		3.8A1	Considers organizational policies related to participating in advocacy activities	X	X	X
		3.8A2	Collaborates with groups working on policies and legislation		X	X
		3.8A3	Performs analysis of existing or proposed legislation or nutrition policies that impact or are impacted by NIFM and IFMNT to guide strategic activities		X	X
		3.8A4	Develops and implements communication plans to educate policy makers about NIFM services		X	X
		3.8A5	Advocates for the role of evidence-based NIFM care and services in chronic disease* management and prevention activities/issues at the local, state, and federal policy level		X	X
		3.8A6	Provides leadership to colleagues (RDNs, community members, and other stakeholders) on nutrition and public policy			X
		3.8A7	Pursues leadership roles in local, state, and national advisory groups related to nutrition laws and regulations			X
	3.8B	**Advocates in support of food and nutrition programs and services for populations with special needs and chronic conditions**		**X**	**X**	**X**
		3.8B1	Advocates for underserved populations (eg, individuals with disabilities, food insecure, identified cultural/religious populations/groups)	X	X	X
	3.8C	**Advocates for protection of the public through multiple avenues of engagement (eg, legislative action, establishing effective relationships with elected leaders and regulatory officials, participation in various Academy committees, workgroups and task forces, Dietetic Practice Groups (DPGs), Member Interest Groups, and State Affiliates)**		**X**	**X**	**X**

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 3: Provision of Services						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
		3.8C1	Advocates (with local media, publications, local governmental agencies, and for/against legislative issues) for including NIFM assessment of individuals as part of wellness promotion and chronic disease* prevention		X	X
		3.8C2	Takes leadership role in advocacy of NIFM component of chronic disease* management and prevention programs; authors articles and delivers presentations on topic			X

Examples of Outcomes for Standard 3: Provision of Services

- Program/service design and systems reflect organization/business mission, vision, principles, values, and customer needs and expectations
- Customers participate in establishing program/service goals and customer-focused action plans and/or nutrition interventions (eg, in-person or via telehealth)
- Customer-centered needs and preferences are met
- Customers are satisfied with services and products
- Customers have access to food assistance
- Customers have access to food and nutrition services
- Foodservice system incorporates sustainability practices addressing energy and water use and waste management
- Menus reflect the cultural, health, and/or nutritional needs of target population(s) and consideration of ecological sustainability
- Evaluations reflect expected outcomes and established goals
- Effective screening and referral services are established or implemented as designed
- Professional, technical, and support personnel are supervised when providing nutrition care to customers
- Ethical and transparent financial management and billing practices are used per role and setting

Standard 4: Application of Research

The registered dietitian nutritionist (RDN) applies, participates in, and/or generates research to enhance practice. Evidence-based practice incorporates the best available research/evidence and information in the delivery of nutrition and dietetics services.

Rationale:

Application, participation, and generation of research promote improved safety and quality of nutrition and dietetics practice and services.

Indicators for Standard 4: Application of Research					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators		**The "X" signifies the indicators for the level of practice**		
Each RDN:		**Competent**	**Proficient**	**Expert**
4.1	**Reviews best available research/evidence and information for application to practice**	**X**	**X**	**X**

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 4: Application of Research					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
	4.1A	**Understands basic research design and methodology (eg, data collection, interpretation of results and application to practice)**	**X**	**X**	**X**
	4.1B	Reads primary peer-reviewed publications in conventional nutrition and NIFM; uses evidence-based practice guidelines addressing the medical and nutritional needs of patient/client population (eg, diabetes, oncology)	X	X	X
	4.1C	Identifies evidence-based information from multiple reputable disciplines and sources (eg, government, national and international, non-governmental organization publications)	X	X	X
	4.1D	Identifies and reviews relevant integrative and functional medicine peer-reviewed journals and NIFM-related publications, resources, and public health trends (prevalence, prevention, and treatment) and applies to practice	X	X	X
	4.1E	Demonstrates the experience and critical thinking skills required to evaluate strength of original research, including limitations and potential bias, and evidence-based guidelines relevant to NIFM		X	X
	4.1F	Identifies key issues related to the prevention and delay of disease and uses systematic methodology to obtain evidence to answer questions and make clinical decisions when evaluating NIFM scientific information		X	X
	4.1G	Uses nutrition science data as the primary resource for writing or reviewing research publications and for clinical decision making		X	X
	4.1H	Identifies and addresses NIFM-related questions and uses a systematic approach to applying research and evidence-based guidelines (eg, Evidence Analysis Library [EAL]); guides others in making informed decisions for NIFM care and services			X
4.2	**Uses best available research/evidence and information as the foundation for evidence-based practice**		**X**	**X**	**X**
	4.2A	Systematically reviews the available scientific literature in situations where evidence-based practice guidelines for NIFM or medical conditions are not available (Refer to DIFM DPG Best Available Decision Tool at https://integrativerdtool.org/)		X	X
	4.2B	Uses advance training, available research, and emerging theories to guide management of complex cases (eg, multiple comorbidities, refractory conditions of unknown etiology, chronic inflammation, gut dysbiosis) in target populations			X
4.3	**Integrates best available research/evidence and information with best practices, clinical and managerial expertise, and customer values**		**X**	**X**	**X**

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 4: Application of Research					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
	4.3A	Accesses commonly used conventional nutrition and NIFM evidence-based resources (eg, Natural Medicines Database) in identifying applicable courses of action in patient/client care	X	X	X
	4.3B	Creates opportunities for community engagement to address target population needs in NIFM research and evaluation		X	X
	4.3C	Monitors and evaluates delivery of patient/client care over time to adapt nutrition interventions/plans of care as indicated according to NIFM best practices and expertise		X	X
4.4	**Contributes to the development of new knowledge and research in nutrition and dietetics**		**X**	**X**	**X**
	4.4A	Participates in efforts to extend research to practice through journal clubs, professional supervision, and the Academy's Research workgroups (eg, EAL)	X	X	X
	4.4B	Participates in interprofessional research teams identifying research issues/questions and collaborative research activities related to NIFM	X	X	X
	4.4C	Uses evidence-based guidelines, best practices, and clinical/practice experience to generate new knowledge and develop guidelines, programs, and policies in NIFM		X	X
	4.4D	Participates in practice-based research networks (eg, Nutrition Research Network) and the development and/or implementation of practice-based research		X	X
	4.4E	Serves as a primary or senior investigator in collaborative research and evaluation teams that examine relationships among environmental, behavioral, genetic, and other sociocultural and economic variables and their impact on health outcomes			X
	4.4F	Functions as a primary or senior author of research and/or organizational position papers (eg, Academy, Institute for Functional Medicine) or other scholarly work			X
	4.4G	Serves as an advisor, mentor, preceptor, and/or committee member for graduate-level research			X
4.5	**Promotes application of research in practice through alliances or collaboration with food and nutrition and other professionals and organizations**		**X**	**X**	**X**
	4.5A	Participates as a member/consultant to collaborative teams addressing NIFM issues by providing evidence-based expertise as appropriate for skill level	X	X	X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 4: Application of Research					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
	4.5B	Disseminates the results and emphasizes the significance and value of NIFM-related research findings	X	X	X
	4.5C	Identifies key stakeholder groups and patient/client/community nutrition priorities for further research collaborations		X	X
	4.5D	Advocates to stakeholder organizations, groups, and/or agencies for prioritizing and funding of NIFM research projects			X

Examples of Outcomes for Standard 4: Application of Research

- Evidence-based practice, best practices, clinical and managerial expertise, and customer values are integrated in the delivery of nutrition and dietetics services
- Customers receive appropriate services based on the effective application of best available research/evidence and information
- Best available science and research/evidence and information is used as the foundation of evidence-based practice

Standard 5: Communication and Application of Knowledge

The registered dietitian nutritionist (RDN) effectively applies knowledge and expertise in communications.

Rationale:

The RDN works with others to achieve common goals by effectively sharing and applying unique knowledge, skills, and expertise in food, nutrition, dietetics, and management services.

Indicators for Standard 5: Communication and Application of Knowledge					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
5.1	**Communicates and applies current knowledge and information based on evidence**		**X**	**X**	**X**
	5.1A	**Demonstrates critical thinking and problem-solving skills when communicating with others**	**X**	**X**	**X**
	5.1B	Interprets current NIFM research and applies to professional practice and to practical application in communications for diverse audiences, as appropriate		X	X
	5.1C	Serves as an expert resource/opinion leader for colleagues, other health care professionals, the community, and outside agencies related to NIFM			X
5.2	**Selects appropriate information and the most effective communication method or format that considers customer-centered care and the needs of the individual/group/population**		**X**	**X**	**X**

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 5: Communication and Application of Knowledge						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
	5.2A		**Uses communication methods (ie, oral, print, one-on-one, group, visual, electronic, and social media) targeted to various audiences**	**X**	**X**	**X**
	5.2B		**Uses information technology to communicate, disseminate, manage knowledge, and support decision making**	**X**	**X**	**X**
		5.2B1	Communicates NIFM information and trends through electronic professional networking groups, social media, and other nutrition informatics resources and tools	X	X	X
		5.2B2	Develops innovative approaches to using current information technology to deliver up-to-date NIFM information to NIFM practitioners, other health care professionals, and the public		X	X
	5.2C		Leads in the advancement of technology/informatics in NIFM practice (eg, information technology research, software program design)			X
5.3	**Integrates knowledge of food and nutrition with knowledge of health, culture, social sciences, communication, informatics, sustainability, and management**			**X**	**X**	**X**
	5.3A		Applies new knowledge of NIFM to nutrition and dietetics practice	X	X	X
	5.3B		Integrates current and emerging scientific knowledge of conventional nutrition and NIFM when considering an individual's or population's health status, behavior barriers, communication skills; seeks collaborative guidance as needed		X	X
5.4	**Shares current, evidence-based knowledge, and information with various audiences**			**X**	**X**	**X**
	5.4A		**Guides customers, families, students, and interns in the application of knowledge and skills**	**X**	**X**	**X**
		5.4A1	Contributes to NIFM education and professional development of nutrition and dietetics practitioners and students/interns, and health practitioners through formal and informal teaching and mentoring		X	X
		5.4A2	Provides interprofessional education and experiential opportunities in health care and other settings		X	X
		5.4A3	Expands course curricula, site-specific learning activities and research projects to include NIFM concepts and practices		X	X
		5.4A4	Develops NIFM mentor and preceptor programs, and interprofessional learning opportunities			X
	5.4B		**Assists individuals and groups to identify and secure appropriate and available educational and other resources and services**	**X**	**X**	**X**
		5.4B1	Provides education resources or assists in locating available resources and services (eg, DIFM DPG website at www.integrativerd.org)	X	X	X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 5: Communication and Application of Knowledge						
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators				**The "X" signifies the indicators for the level of practice**		
Each RDN:				**Competent**	**Proficient**	**Expert**
		5.4B2	Assists in identifying resources to evaluate dietary supplements* for identity, safety, efficacy, and quality		X	X
		5.4B3	Establishes quality criteria for identifying best available resources and services in NIFM/integrative and functional health			X
	5.4C	**Uses professional writing and verbal skills in all types of communications**		**X**	**X**	**X**
		5.4C1	Sharpens written and oral communication skills with the ability to translate complex scientific and policy information to the needs of various audiences	X	X	X
	5.4D	**Reflects knowledge of population characteristics in communication methods (eg, literacy, numeracy levels, need for translation of written materials and/or a translator, communication skills)**		**X**	**X**	**X**
5.5	**Establishes credibility and contributes as a food and nutrition resource within the interprofessional health care and management team, organization, and community**			**X**	**X**	**X**
	5.5A	Presents to the local community on topics related to nutrition, health, and wellness (eg, health fairs, wellness days)		X	X	X
	5.5B	Integrates NIFM into patient/client or community wellness and/or prevention programs (eg, community wellness fairs, school nutrition presentations, programs for seniors)			X	X
	5.5C	Serves as a resource and conducts activities to educate interprofessional team members about NIFM, its applications and strategies, and potential for health promotion, disease prevention, and positive health outcomes			X	X
	5.5D	Consults as an expert/resource on emerging scientific information in NIFM and/or related field with colleagues and/or medical community				X
	5.5E	Identifies new opportunities for leadership across disciplines to promote NIFM				X
5.6	**Communicates performance improvement and research results through publications and presentations**			**X**	**X**	**X**
	5.6A	Presents NIFM evidence-based research topics for consumers and health care professionals		X	X	X
	5.6B	Presents evidence-based NIFM research and information at professional meetings and conferences (eg, local, regional, national, or international)			X	X
	5.6C	Serves in leadership role for publications (eg, editor, editorial advisory board), review of textbooks, and articles for journal publications			X	X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 5: Communication and Application of Knowledge					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
	5.6D	Develops grants and white papers, delivers presentations, and authors books and articles that incorporate and disseminate NIFM concepts and best practices to various stakeholders (eg, peers, consumers, health professionals, educators, community groups, policy makers, and food system leaders)			X
	5.6E	Leads the development of NIFM-related publications and program planning for professional meetings, conferences, and workshops (eg, local, state, regional, national, or international)			X
	5.6F	Directs collation of research data into publications (eg, systematic reviews, position papers) and presentations			X
5.7	**Seeks opportunities to participate in and assume leadership roles with local, state, and national professional and community-based organizations (eg, government-appointed advisory boards, community coalitions, schools, foundations or non-profit organizations serving the food insecure) providing food and nutrition expertise**		**X**	**X**	**X**
	5.7A	Interfaces and collaborates with other health care professionals	X	X	X
	5.7B	Seeks opportunities to integrate NIFM into clinical practice and programs	X	X	X
	5.7C	Serves and leads on local planning committees and task forces for health professionals, industry, and community	X	X	X
	5.7D	Serves and leads on regional, national, and international planning committees and task forces		X	X
	5.7E	Serves on planning committees/task forces to develop continuing education, activities, and programs in NIFM practice for students/ interns and practitioners		X	X
	5.7F	Serves as NIFM media spokesperson (eg, interviews, guest commentary, editorials)			X
	5.7G	Serves as a consultant to organizations (eg, business, industry, government, health) on NIFM practices to address the needs of consumers, health care professionals, and health care providers			X
	5.7H	Functions as a business and opinion leader within the scope of NIFM			X

Examples of Outcomes for Standard 5: Communication and Application of Knowledge

- Expertise in food, nutrition, dietetics, and management is demonstrated and shared
- Interoperable information technology is used to support practice
- Effective and efficient communications occur through appropriate and professional use of e-mail, texting, and social media tools

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

- Individuals, groups, and stakeholders:
  - Receive current and appropriate information and customer-centered service
  - Demonstrate understanding of information and behavioral strategies received
  - Know how to obtain additional guidance from the RDN or other RDN-recommended resources
- Leadership is demonstrated through active professional and community involvement

Standard 6: Utilization and Management of Resources
The registered dietitian nutritionist (RDN) uses resources effectively and efficiently.
Rationale:
The RDN demonstrates leadership through strategic management of time, finances, facilities, supplies, technology, natural and human resources.

Indicators for Standard 6: Utilization and Management of Resources					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
6.1	**Uses a systematic approach to manage resources and improve outcomes**		**X**	**X**	**X**
	6.1A	Participates in operational planning of NIFM programs and services (eg, staffing, marketing, budgeting, information management system/tools, billing)	X	X	X
	6.1B	Manages effective delivery of NIFM programs and services (eg, business and marketing plan, budget and billing processing, program administration)		X	X
	6.1C	Directs or manages design and delivery of NIFM services in various settings			X
	6.1D	Guides the planning, implementation, and evaluation of services at the local, state, federal, and/or international levels			X
	6.1E	Oversees the responsible and accurate management of grants and projects in order to achieve comprehensive outcomes			X
6.2	**Evaluates management of resources with the use of standardized performance measures and benchmarking as applicable**		**X**	**X**	**X**
	6.2A	**Uses the Standards of Excellence Metric Tool to self-assess quality in leadership, organization, practice, and outcomes for an organization (www.eatrightpro.org/excellencetool)**	**X**	**X**	**X**
	6.2B	Participates in collecting and analyzing patient/client population and outcomes data, program resource/service participation, and expense data to evaluate and adjust programs and services	X	X	X
	6.2C	Leads and participates in data collection regarding the population served, services provided, and outcomes (eg, demographics, staffing, benchmarking, reimbursement/revenue)		X	X
	6.2D	Directs operational review reflecting evaluation of performance and benchmarking data to manage resources and modifications for design and delivery of NIFM programs and services			X

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

Indicators for Standard 6: Utilization and Management of Resources					
Bold Font Indicators are Academy Core RDN Standards of Professional Performance Indicators			**The "X" signifies the indicators for the level of practice**		
Each RDN:			**Competent**	**Proficient**	**Expert**
6.3	**Evaluates safety, effectiveness, efficiency, productivity, sustainability practices, and value while planning and delivering services and products**		**X**	**X**	**X**
	6.3A	Participates in evaluation, selection, and implementation, if applicable, of new products (eg, functional foods,* botanicals) to assure safe and optimal delivery of NIFM; seeks assistance if needed	X	X	X
	6.3B	Implements, assists in developing, and monitors use of protocols/ guidelines for recommending/ordering diagnostic and laboratory evaluations		X	X
6.4	**Participates in quality assurance and performance improvement (QAPI) and documents outcomes and best practices relative to resource management**		**X**	**X**	**X**
	6.4A	Collects QAPI data using designated tools and analyzes to improve outcomes and identify best practices in collaboration with others as needed	X	X	X
	6.4B	Proactively and systematically recognizes needs; anticipates outcomes and consequences of various approaches; modifies resource management and/or delivery of services for improvement in achieving desired outcomes		X	X
	6.4C	Reports outcomes of delivery of services and quality improvement activities against goals and performance targets		X	X
	6.4D	Partners with relevant health professionals to assess return on investment of services and programs			X
6.5	**Measures and tracks trends regarding internal and external customer outcomes (eg, satisfaction, key performance indicators)**		**X**	**X**	**X**
	6.5A	Participates in developing and conducting regular surveys with patients/clients/advocates, community participants and stakeholders to assess client/population satisfaction	X	X	X
	6.5B	Participates in or analyzes data related to program services and patient/client satisfaction; communicates results and recommendations for change(s)		X	X
	6.5C	Resolves internal and external problems that may affect the delivery of NIFM services		X	X
	6.5D	Implements, monitors, and evaluates changes based on data collection and analysis			X

Examples of Outcomes for Standard 6: Utilization and Management of Resources

- Resources are effectively and efficiently managed
- Documentation of resource use is consistent with operational and sustainability goals
- Data are used to promote, improve, and validate services, organization practices, and public policy

(continued on next page)

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.

- Desired outcomes are achieved, documented, and disseminated
- Identifies and tracks key performance indicators in alignment with organizational mission, vision, principles, and values

Editor's note: An asterisk (*) denotes terms that can be found in the Glossary of Terms, which is published with the Academy of Nutrition and Dietetics: Revised 2019 Standards of Practice and Standards of Professional Performance (Competent, Proficient, Expert) for Registered Dietitian Nutritionists in Nutrition in Integrative and Functional Medicine article.

[a]**Nutrition in Integrative and Functional Medicine (NIFM):** *Nutrition in integrative and functional medicine* reflects both integrative and functional medicine. which encompass a patient-/client-centered, healing-oriented approach that embraces conventional and complementary therapies.[1] RDNs practicing NIFM provide nutrition care and services by performing a systems assessment (biological, clinical, and lifestyle) to develop a plan of care; and evaluating physical, social, lifestyle, and environmental factors that influence interactions between the mind, body, and spirit.[12,13] NIFM encompasses *integrative and functional medical nutrition therapy*, a term used by the DIFM DPG to identify medical nutrition therapy that incorporates both integrative and functional medicine principles with conventional nutrition practices for chronic disease conditions and some acute conditions (eg, cancer, arthritis, cardiovascular, or neurodegenerative diseases). RDNs in NIFM may work in private practice, as part of an integrative and functional medicine health care team or practice, as faculty in nutrition and dietetics education programs, in research, and other settings.

[b]**Interprofessional**: The term *interprofessional* is used in this evaluation resource as a universal term. It includes a diverse group of team members (eg, physicians, naturopathic doctors, physician assistants, chiropractors, nurses, dietitian nutritionists, pharmacists, massage therapists), depending on the needs of the customer. Interprofessional could also mean interdisciplinary or multidisciplinary.

[c]**PROMIS**: The Patient-Reported Outcomes Measurement Information System (*PROMIS*) (https://commonfund.nih.gov/promis/index) is a reliable, precise measure of patient-reported health status for physical, mental, and social well-being. *PROMIS* is a web-based resource and is publicly available.

[d]**Advocate:** An *advocate* is a person who provides support and/or represents the rights and interests at the request of the patient/client. The person may be a family member or an individual not related to the patient/client who is asked to support the patient/client with activities of daily living or is legally designated to act on behalf of the patient/client, particularly when the patient/client has lost decision making capacity. (Adapted from definitions within The Joint Commission Glossary of Terms[14] and the Centers for Medicare and Medicaid Services, Hospital Conditions of Participation[6]).

[e]**Medical staff**: A *medical staff* is composed of doctors of medicine or osteopathy and may in accordance with state law, including scope of practice laws, include other categories of physicians, and non-physician practitioners who are determined to be eligible for appointment by the governing body.[6]

[f]**Non-physician practitioner**: A *non-physician practitioner* may include a physician assistant, nurse practitioner, clinical nurse specialist, certified registered nurse anesthetist, certified nurse-midwife, clinical social worker, clinical psychologist, anesthesiologist's assistant, and qualified dietitian or qualified nutrition professional. Disciplines considered for privileging by a facility's governing body and medical staff must be in accordance with state law.[6,7] The term *privileging* is not referenced in the Centers for Medicare and Medicaid Services long-term care (LTC) regulations. With publication of the Final Rule revising the Conditions of Participation for LTC facilities effective November 2016, post-acute care settings, such as skilled and LTC facilities, may now allow a resident's attending physician the option of delegating order writing for therapeutic diets, nutrition supplements or other nutrition-related services to the qualified dietitian or clinically qualified nutrition professional, if consistent with state law, and organization policies.[9,10]

Figure 2. *(continued)* Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) in Nutrition in Integrative and Functional Medicine. Note: The term *customer* is used in this evaluation resource as a universal term. Customer could also mean client/patient/ customer, family, participant, consumer, or any individual, group, or organization to which the RDN provides service.