CPE Academy of Nutrition and Dietetics and National Kidney Foundation: Revised 2020 Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists (Competent, Proficient, and Expert) in Nephrology Nutrition

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Nephrology nutrition encompasses therapeutic and preventive nutrition care for individuals through the life cycle and addresses a variety of kidney disorders. Most nephrology nutrition practice focuses on care of individuals with chronic kidney disease, those on dialysis, and recipients of kidney transplants. The Renal Dietitians Dietetic Practice Group, National Kidney Foundation Council on Renal Nutrition, along with the Academy of Nutrition and Dietetics Quality Management Committee, have revised the Standards of Practice (SOP) and Standards of Professional Performance (SOPP) for RDNs working in nephrology nutrition. The SOP and SOPP for RDNs in Nephrology Nutrition 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 nephrology nutrition and for determining potential education and training needs for advancement to a higher practice level in a variety of settings.

This article has an online CPE activity available at www.kidney.org/professionals/CRN/ceuMain.cfm

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

The Academy of Nutrition and Dietetics (Academy) Renal Dietitians Dietetic Practice Group (RPG), and the National Kidney Foundation Council on Renal Nutrition (NKF-CRN), under the guidance of the Academy Quality Management Committee, have revised the Standards of Practice (SOP) and Standards of Professional Performance (SOPP) for Registered Dietitian Nutritionists (RDNs) in Nephrology Nutrition previously revised in 2014.[1,2] The revised document, Academy of Nutrition and Dietetics and National Kidney Foundation: Revised 2020 Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists (Competent, Proficient, and Expert) in Nephrology Nutrition, reflects advances in nephrology nutrition practice during the past 6 years and replaces the 2014 Standards. This document builds on the Academy of Nutrition and Dietetics: Revised 2017 SOP in Nutrition Care and SOPP for RDNs.[3] The Academy of Nutrition and Dietetics/Commission on Dietetic Registration's (CDR) Code of Ethics for the Nutrition and Dietetics Profession,[4] along with the Academy of Nutrition and Dietetics: Revised 2017 SOP in Nutrition Care and SOPP for RDNs[3] and Revised 2017 Scope of Practice for the RDN,[5] 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

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code(s) of ethics (eg, Academy/CDR, other national organizations, or employers code of ethics), and encompasses the range of roles, activities, practice guidelines, and regulations within which RDNs perform. For credentialed practitioners, scope of practice is typically established within the practice act and interpreted and controlled by the agency or board that regulates the practice of the profession in a given state.[5] 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 https://www.eatrightpro.org/advocacy/licensure/licensure-map.

The RDN's individual scope of practice is determined by education, training, credentialing, experience, and 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 RDNs practice opportunities, such as expanded roles within an organization based on training and certifications, if required; or additional credentials (eg, Board Certified Specialist in Renal Nutrition [CSR], Geriatrics [CSG], or Pediatrics [CSP]; Advanced Practitioner Certification in Clinical Nutrition [RDN-AP]; Certified Diabetes Care and Education Specialist [CDCES]; Certified Clinical Transplant Dietitian [CCDT] or Certified Case Manager [CCM]). 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 their scope of practice. The algorithm is designed to assist an RDN to critically evaluate their personal knowledge, skills, experience, judgment, and demonstrated competence using criteria resources.[6]

The Centers for Medicare and Medicaid Services (CMS), Department of Health and Human Services, Hospital[7] and Critical Access Hospital[8] 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 "non-physician 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 (https://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.[9] 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*, now "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.[10] The qualified professional must be acting within the scope of practice as defined by state law; and is under

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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.

Approved September 2020 by the Quality Management Committee of the Academy of Nutrition and Dietetics (Academy) and the Executive Committee of the Renal Dietitians Dietetic Practice Group of the Academy and the National Kidney Foundation Council on Renal Nutrition. Scheduled review date: February 2027. Questions regarding the Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists in Nephrology Nutrition may be addressed to Academy Quality Management Staff: Dana Buelsing, MS, manager, Quality Standards Operations; and Carol J. Gilmore, MS, RDN, LD, FADA, FAND, scope/standards of practice specialist, Quality Management at quality@eatright.org.

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 (https://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 processes 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 color).[11] The CMS periodically revises the State Operations Manual Conditions of Participation; obtain the current information at https://www.cms.gov/files/document/som107appendicestoc.pdf

Academy Quality and Practice Resources

The Academy's Revised 2017 SOP in Nutrition Care and SOPP for RDNs[3] 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 as applied to the care of patients/clients/populations in all settings.[12] The SOPP consist of standards representing 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, equitable, 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 nephrology nutrition 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 nephrology nutrition and dietetic services. They are used by RDNs to assess their current level of practice and to determine the education and training required to maintain currency in their focus area and advancement to a higher level of practice. In addition, the standards 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,[3] the indicators (ie, measurable action statements that illustrate how each standard can be applied in practice) (Figures 1 and 2, available at www.jrnjournal.org) for the SOP and SOPP for RDNs in Nephrology Nutrition were revised with input and consensus of content experts representing diverse practice and geographic perspectives. The SOP and SOPP for RDNs in Nephrology Nutrition were reviewed and approved by the Executive Committee of the Renal Dietitians Dietetic Practice Group, the Executive Committee of the National Kidney Foundation's Council on Renal Nutrition, and the Academy Quality Management Committee.

Three Levels of Practice

The Dreyfus model[14] 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. On successfully attaining the RDN credential, a practitioner enters professional practice at the competent level and manages their 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 Nephrology Nutrition. 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 their 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.[15] 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.[15] A general practice RDN can include responsibilities across several areas of practice, including, but not limited to: community, clinical, consultation and business, research, education, and food and nutrition management.

A career as an RDN in nephrology nutrition is an evolving process of advancement in skill as well as expanding and changing areas of interest and engagement.

With safety and evidence-based practice[15] as guiding factors when working with patients/clients/customers/populations, 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 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. The RDN is responsible for searching literature and assessing the level of evidence to select the best available evidence to inform recommendations. RDNs must evaluate and understand the best available evidence to converse authoritatively with the interdisciplinary team and adequately involve the patient/client/customer/population in shared decision making.

A competent RDN in nephrology nutrition is learning the principles of nephrology nutrition and becoming familiar with evidence-based practice guidelines in nephrology, including those published by the Academy Evidence Analysis Library (EAL),[16] Kidney Disease Outcomes Quality Initiative (KDOQI),[17,18] and Kidney Disease Improving Global Outcomes (KDIGO)[19] (See Figure 4). The competent-level practitioner in nephrology nutrition is developing an understanding of approaches to nutrition assessment, diagnosis, and care planning in nephrology and is learning about common co-morbidities and appropriate management.[20] An RDN aspiring to enter the focus area of nephrology nutrition in a dialysis setting must have a minimum of 1 year of clinical experience, as required by the CMS Conditions for Coverage.[21] The Academy's Certificate of Training program in Chronic Kidney Disease Nutrition Management may be a valuable resource for knowledge and skill acquisition for the competent-level RDN (https://www.eatrightstore.org/collections/chronic-kidney-disease-nutrition-management). It is also important for RDNs new to nephrology nutrition to become familiar with the regulatory and quality standards of this focus area.

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.[15] The proficient-level practitioner in nephrology nutrition has gained additional work experience in the care of patients/clients with kidney disease and has developed a deeper understanding of nephrology nutrition concepts and principles. The proficient-level RDN in nephrology may begin to develop deeper, focused knowledge of specific renal replacement therapies such as home dialysis or kidney transplant, in populations such as pediatrics, or in one or more aspects of nephrology nutrition practice, such as management of chronic kidney disease (CKD), fluids or anemia, mineral and bone disorder, malnutrition/malnutrition-inflammation syndrome, or use of plant-based diets. The RDN may be working toward or have obtained the education, knowledge, and experience to be eligible for the Board Certification as a Specialist in Renal Nutrition (CSR) to demonstrate proficiency.

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 on nutrition and dietetics.[15] An expert practitioner may have an expanded or specialist role or both, and may possess an advanced credential(s) such as the CDR Advanced Practitioner Certification in Clinical Nutrition, CDR Certified Specialist in Renal Nutrition or Pediatrics, or the Certified Clinical Transplant Dietitian (CCTD) designation through the North American Transplant Coordinators Organization.[22] Generally, the practice is more complex, and the practitioner has a high degree of professional autonomy and responsibility. The expert-level practitioner in nephrology nutrition has extensive practice experience and knowledge across the spectrum of kidney disease stages and renal replacement therapies and demonstrates an intuitive understanding of nephrology nutrition concepts. The expert RDN formulates clinical judgments through a combination of education, experience, intuition, and critical thinking. As an expert in nephrology nutrition, the RDN may function in an expanded or leadership role within the facility or organization. The Expert RDN in nephrology nutrition leads efforts to advance nephrology nutrition practice and advocates for policies and practice that are supported by current evidence.

These Standards, along with the Academy/CDR Code of Ethics,[4] answer the questions: Why is an RDN uniquely qualified to provide nephrology nutrition and dietetics services? What knowledge, skills, and competencies does an RDN need to demonstrate for the provision of safe, effective, equitable, and quality nephrology nutrition care and service at the competent, proficient, and expert levels?

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 Nephrology Nutrition 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 Nephrology Nutrition 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 complementary standards and serve as evaluation resources. 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 their 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 nephrology 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, advocate 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 nephrology nutrition (see image below). In addition, the core indicators have been expanded to reflect the unique competence expectations for the RDN providing nephrology nutrition.

Standards described as proficient level of practice in this document are not equivalent to the CDR certification, Board Certified as a Specialist in Nephrology Nutrition (CSR). Rather, the CSR designation recognizes the skill level of an RDN who has developed and demonstrated through successful completion of the certification examination, nephrology nutrition knowledge and application beyond the competent practitioner and demonstrates, at a minimum, proficient-level skills. An RDN with the CSR designation is an example of an RDN who has demonstrated additional knowledge, skills, and experience in nephrology nutrition by the attainment of a specialist credential.

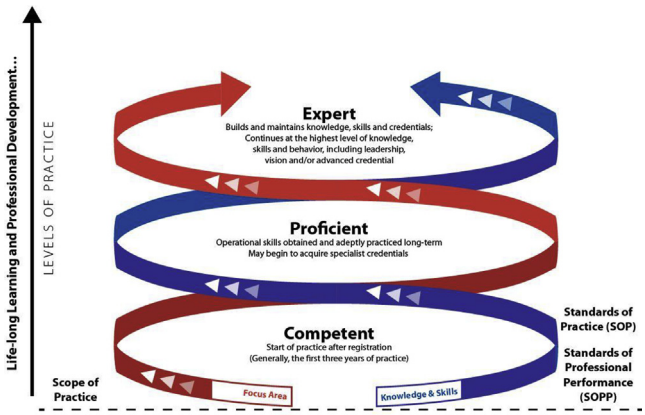

Figure 3. Standards of Practice and Standards of Professional Performance for Registered Dietitian Nutritionists (RDNs) (Competent, Proficient, and Expert) in Nephrology Nutrition

Resource	Address	Description
Academy of Nutrition and Dietetics (Academy) Resources		
Academy Renal Practice Group (RPG)	www.renalnutrition.org	This Academy dietetic practice group strives to empower its members to be the nation's leaders in nephrology nutrition. RPG offers resources for registered dietitian nutritionists (RDNs) in nephrology nutrition, such as access to a newsletter, electronic mailing list, member resource library including patient education materials, continuing professional education opportunities, and webinars.
Certificate of Training Program: Chronic Kidney Disease Nutrition Management	https://www.eatrightstore.org/collections/chronic-kidney-disease-nutrition-management	This online certificate of training program assists RDNs to further their skills and advance their practice related to chronic kidney disease (CKD) management. The program consists of five separate modules that include topics such as CKD basics, preventing and slowing progression of CKD, increased complications as kidney function declines, diet for CKD, and transition of CKD to kidney failure.
Chronic Kidney Disease and the Nutrition Care Process	https://www.eatrightstore.org/product-type/ebooks/chronic-kidney-disease-and-the-nutrition-care-process-ebook	This book provides the latest evidence-based guidelines and recommendations regarding medical nutrition therapy for CKD. Each chapter includes a case study that illustrates progression through the nutrition care process.
A Clinical Guide to Nutrition Care in Kidney Disease, 2nd Ed	https://www.eatrightstore.org/product-type/books/a-clinical-guide-to-nutrition-care-in-kidney-disease-2ed	This book discusses kidney disease in adults and children, from early-stage CKD to dialysis, transplantation, and nutrition support therapies. It includes information on nocturnal home dialysis, dietary supplements, and acute kidney injury and is a good resource for RDNs preparing for the Board Certified Specialist in Renal Nutrition (CSR) credentialing exam. The 3rd edition is forthcoming in 2021.
Making Choices: Meal Planning for Diabetes and CKD	https://www.eatrightstore.org/product-type/ebooks/making-choices–meal-planning-for-people-with-diabetes-and-chronic-kidney-disease-stages-3-and-4-ebo	This book assists RDNs in counseling patients/clients with both diabetes and CKD. It includes: A Practitioner's Guide, Making Choices: Meal Planning for People with Diabetes and CKD Disease Stages 3 and 4, and other supplementary patient education handouts.
National Kidney Diet: Dish Up a Kidney/Dialysis-Friendly Meal (Joint Resources between RPG and the National Kidney Foundation Council on Renal Nutrition [NKF-CRN])	https://www.eatrightstore.org/product-type/brochures-handouts/dish-up-a-dialysis-friendly-meal https://www.eatrightstore.org/product-type/brochures-handouts/dish-up-a-kidney-friendly-meal	The updated National Kidney Diet includes handouts for educating patients/clients on meal planning for kidney disease. There are versions for CKD and dialysis, and the handouts include sample healthy meal plans, advice for planning meals, and guidelines and tips for making choices from each food group.
Nutrition Focused Physical Exam Pocket Guide, 2nd Ed.	https://www.eatrightstore.org/product-type/ebooks/nutrition-focused-physical-exam-pocket-guide-second-edition-ebook	This pocket guide provides RDNs with tools for malnutrition assessment, documentation, and coding, and also includes resources such as an adult malnutrition characteristics chart, and a physical exam table describing muscle and fat wasting, micronutrient deficiencies and toxicities, and edema charts.
Academy Find an Expert service	https://www.eatright.org/find-an-expert	The Academy of Nutrition and Dietetics' Find a Registered Dietitian Nutritionist online referral service allows you to search a national database of Academy members for the exclusive purpose of finding a qualified

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Figure 4. Resources for Registered Dietitian Nutritionists in Nephrology Nutrition (not all inclusive).

Resource	Address	Description
		RDN. Users can search by area of expertise to find specialists in kidney and renal diseases.
Commission on Dietetic Registration (CDR) Preceptor Training Course	https://www.cdrnet.org/news/online-dietetics-preceptor-training-course-free-of-charge	CDR provides a free, self-paced training course to prepare RDNs to serve as preceptors for interns, students, and peers. The training course is approved for 8 CPEUs for RDNs.
National Kidney Foundation (NKF) Resources		
NKF Council on Renal Nutrition (CRN)	https://www.kidney.org/professionals/CRN	The Council on Renal Nutrition (CRN) functions as a professional council within the framework of the National Kidney Foundation (NKF) and networks with other organizations to support the National Kidney Foundation's goal of making lives better for those with CKD through education, outreach, and research in the field of nutrition as it pertains to prevention, eradication, and treatment of kidney and urologic diseases.
Kidney Disease Outcomes Quality Initiative (KDOQI) Clinical Practice Guidelines	https://www.kidney.org/professionals/guidelines	KDOQI has published 13 evidence-based guidelines to guide clinical practice in the care and management of individuals with CKD and end-stage kidney disease (ESKD). KDOQI also provides collaboration through wider policy and education programs to support implementation of guideline recommendations.
NKF Professional Education Resource Center (PERC)	https://education.kidney.org/	This resource center is designed for professionals committed to continuing their education and improving patient outcomes. PERC provides resources such as free courses in topics such as managing iron-deficiency anemia in non-dialysis CKD, activity programs, frequently asked questions, and events.
CRN Pocket Guide to Nutrition Assessment in the Patient with CKD	https://nkf.worksmartsuite.com/UserEditFormFilling.aspx	This pocket guide resource provides specific chapters based on KDIGO (see below) and KDOQI guidelines and recommendations for nutrition; peritoneal dialysis and hemodialysis; diabetes; cardiovascular disease, dyslipidemia, hypertension; CKD mineral and bone disorder; and CKD-related anemia. Special populations include acute kidney injury, gout, HIV/AIDS, nephrolithiasis, nephrotic syndrome, older adults, pediatrics, pregnancy, and kidney transplant. The 5th edition is currently available to CRN members in a PDF format, and the 6th edition is in process. The pocket guide is an excellent resource for preparing for the CSR exam.
CKD Dietitian Directory	https://sites.google.com/view/ckdrd/home	This directory is provided by the National Kidney Foundation Council on Renal Nutrition as a resource to individuals looking for RDNs that treat pre-dialysis chronic kidney disease patients.
Other Resources		
National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)	https://www.niddk.nih.gov/	The NIDDK, part of the National Institutes of Health, conducts and supports medical research training and disseminates evidence-based information on diabetes and other endocrine and metabolic diseases, digestive diseases, nutritional disorders, and obesity; and kidney, urologic, and hematologic diseases, to improve health and quality of life. The NIDDK provides a variety of resources of value to patients, health

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Figure 4. *(continued)* Resources for Registered Dietitian Nutritionists in Nephrology Nutrition (not all inclusive).

Resource	Address	Description
		professionals, and educators and is now home to the resources of the National Kidney Disease Education Program (NKDEP).
Kidney Disease Improving Global Outcomes (KDIGO)	https://kdigo.org/	KDIGO is a global nonprofit organization developing and implementing evidence-based clinical practice guidelines in kidney disease. KDIGO's 12 guidelines translate global scientific evidence into practical recommendations for clinicians and patients, guiding prevention or management of individuals with kidney diseases.
American Kidney Fund	https://www.kidneyfund.org/	The American Kidney Fund's mission is to fight kidney disease and help people live healthier lives with programs that support people wherever they are in their fight against kidney disease. They provide resources for kidney patients and nephrology professionals, including free, accredited online continuing education courses.
Kidney School	https://kidneyschool.org/	Provides information about kidney disease and dialysis helpful for RDNs new to nephrology as well as continuing education and patient education materials.

Figure 4. *(continued)* Resources for Registered Dietitian Nutritionists in Nephrology Nutrition (not all inclusive).

Overview

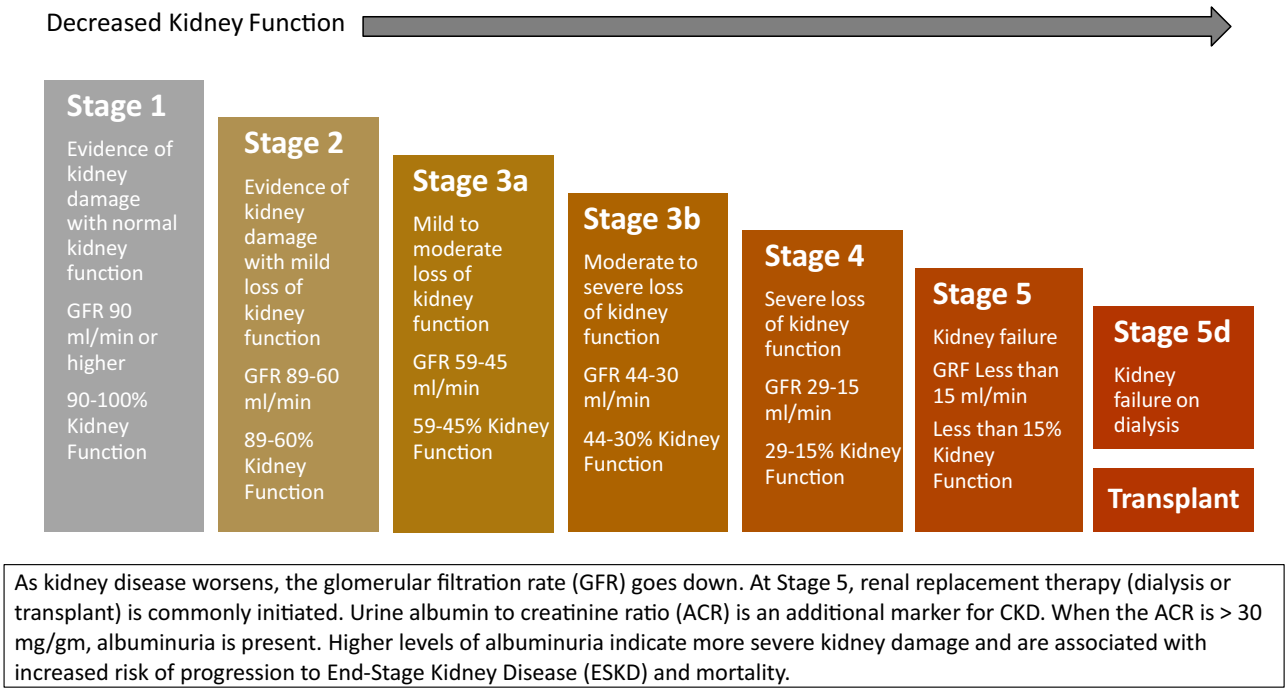
Nephrology nutrition encompasses therapeutic and preventive nutrition care for individuals through the life cycle and addresses a variety of kidney disorders. Most nephrology nutrition practice focuses on care of individuals with CKD, those on dialysis, and recipients of kidney transplants. RDNs in nephrology nutrition also may provide therapeutic nutrition for management of nephrolithiasis or rare kidney disorders.

Chronic kidney disease is most commonly a complication of diabetes or hypertension. It also may be caused by or associated with multiple chronic conditions, including cardiovascular disease, liver disease, or obesity. Glomerulonephritis, inherited conditions such as polycystic kidney disease, autoimmune disorders such as systemic lupus erythematosus, and congenital anomalies also contribute to the burden of CKD. Acute kidney injury (AKI) can result from trauma, infection, toxicity, or shock and can lead to long-term kidney failure.[23]

Chronic kidney disease has been classified into five stages, as seen in Figure 5.[24] When CKD has progressed to the point that dialysis is required, the designation of Stage 5D is used. The spectrum of CKD also includes individuals who have received kidney transplants. Common diagnostic tests or indices for CKD in adults include estimated glomerular filtration rate (eGFR),[25] albuminuria, and the albumin to creatinine ratio (ACR).[26] Kidney biopsy is commonly used to determine the cause of CKD. Pediatric patients are assessed using the Schwartz equation.[27]

The Medicare End-Stage Renal Disease (ESRD) program was created in 1972,[28] extending Medicare benefits to all with ESRD, now referred to as End-Stage Kidney Disease (ESKD) regardless of age. Medicare remains the primary payer of ESKD care in the United States. The Conditions for Coverage,[21,29] last updated in 2008, establish and regulate the standards of care for dialysis organizations. Similar regulations govern transplant centers.[30,31] It is the responsibility of every RDN to be familiar with and use the most current regulatory guidelines applicable to practice setting as they are updated over time.

Chronic kidney disease is one of two conditions for which Medical Nutrition Therapy (MNT)[32] is a covered Medicare benefit. Individuals with eGFR of 13 to 50 mL/min/1.73m^2 (approximately CKD Stage 3b-5) or within 3 years post-transplantation are eligible. Although retrospective studies have shown that MNT can slow progression of CKD and improve biochemical markers, the therapy continues to be underutilized.[33] In one 2011 study, only 12% of incident hemodialysis patients received nutrition care provided by an RDN before starting dialysis.[34] The most recent US Renal Data System (USRDS) data indicate that 11.4% of incident ESKD patients in the Medicare population received care from a dietitian before starting dialysis.[35]



As kidney disease worsens, the glomerular filtration rate (GFR) goes down. At Stage 5, renal replacement therapy (dialysis or transplant) is commonly initiated. Urine albumin to creatinine ratio (ACR) is an additional marker for CKD. When the ACR is > 30 mg/gm, albuminuria is present. Higher levels of albuminuria indicate more severe kidney damage and are associated with increased risk of progression to End-Stage Kidney Disease (ESKD) and mortality.

Figure 5. Stages of Chronic Kidney Disease

From 2016 to 2017, the last year for which data is available at time of print, the prevalence of CKD in Medicare patients older than 65 years of age increased from 13.8% to 14.5%; most were classified as Stage 3. Incidence of CKD is higher in males, older adults, blacks, and non-Hispanic whites.[35–37] Although the incidence of ESKD in the United States has been relatively flat since 2006, the prevalence continues to increase, as the population ages and survival on dialysis improves.[35] Total Medicare spending for CKD and ESKD in the Medicare population exceeded $120 billion in 2017, accounting for 33.8% of total Medicare spending.[38]

The primary renal replacement therapy in the United States remains in-center hemodialysis; approximately 83% of ESKD patients initiate treatment with this therapy. Use of home dialysis therapies, including peritoneal dialysis (PD) and home hemodialysis (HHD) have increased significantly since 2007, but utilization remains low, with only 4% of patients starting on HHD and 10% on PD. Approximately 30% of people on dialysis ultimately receive kidney transplants, but only 1% of adults receive them preemptively.[35] Adults with CKD may also be cared for with conservative management strategies instead of dialysis or transplantation. In the pediatric population, 28% of patients initiate therapy with PD, and 21% receive preemptive transplants before requiring dialysis.[35] Individuals with AKI may be treated in acute care settings with hemodialysis (HD) or continuous renal replacement therapy (CRRT). An increasing number of AKI patients receive hemodialysis in an outpatient setting once medically stable after changes in Medicare payment policies.[38]

The KDOQI,[17] established in 1995 by the NKF, has published 13 sets of clinical practice guidelines governing aspects of CKD care. The first practice guidelines for nephrology nutrition were published by KDOQI in 2000 and were subsequently evaluated through the EAL's systematic review process, resulting in practice guidelines for CKD.[16] Beginning in 2015, the Academy and NKF partnered to update the 2000 KDOQI nutrition guidelines. The updated KDOQI nutrition guidelines were published in 2020.[39,40] The KDIGO initiative has also published international evidence-based practice guidelines for care of people with CKD.[19] The KDOQI and KDIGO guidelines are used by nephrology practitioners to manage aspects of care, such as bone disease, anemia, diabetes, and dialysis adequacy, and for the care of specific populations such as pediatric patients[18] and transplant recipients.

People with CKD experience a number and variety of comorbidities, particularly in the more advanced stages. They are at risk for protein-energy or protein malnutrition, resulting from increased protein and energy needs, anorexia, and protein losses via dialysis.[41] Malnutrition may contribute to growth and developmental delays in children with CKD.[42] Abnormal vitamin D activation and imbalances of calcium and phosphorus cause bone disease, most commonly of a high-turnover variety. Extraskeletal calcification may occur, impacting the heart, lungs, and vasculature.[23] Calcifications in dermal tissues can progress to calciphylaxis, which is fatal in over 50% of cases.[43] Erythropoiesis is impaired with declining kidney function, resulting in anemia that typically requires medical intervention. Micronutrient deficiencies may occur, particularly in

individuals on dialysis, who are susceptible to deficiencies of water-soluble vitamins such as B vitamins and vitamin C.[23] More than 90% of dialysis patients are deficient in vitamin D.[44] Deficiencies of zinc and iron may also occur. Failure to thrive may occur in children and adults with CKD.[23] Hyperlipidemia, hyperglycemia, and weight gain are common complications in patients on PD or post-transplantation. Patients with transplants are also at risk for abnormalities in serum minerals, such as magnesium and phosphorus, and malignancies related to immunosuppressive agents.[45]

RDNs provide care for people with CKD in numerous and varied settings. They:

- Practice in the dialysis industry, where RDNs are mandated members of the interdisciplinary team (IDT). This may include traditional in-center hemodialysis as well as nocturnal, self-care, and home dialysis therapy programs. RDNs must have 1 year of clinical work experience as an RDN to work in adult dialysis programs.[21]
- Provide care to patients with CKD, ESKD, and AKI in the acute care and long-term care settings.
- Serve on transplant teams, in which RDNs are mandated members of the IDT. Nutrition care includes evaluation of transplant candidacy, providing care before and after surgery, and long-term follow-up.
- Provide MNT to people with CKD in CKD clinics, physician offices, private practices, and via telehealth.

Nephrology nutrition practice includes nutrition screening, assessment, diagnosis, intervention, and evaluation, including interdisciplinary care planning, and education/counseling. RDNs play active roles in management of bone disease, malnutrition, electrolytes, fluid balance, anemia, nephrolithiasis, body weight (especially pre-transplantation), and diabetes. In many nephrology practice settings, the RDN is often the sole nutrition resource to the team, providing education to staff and support to nephrologists. RDNs may be actively involved in quality improvement and oversight of dialysis adequacy. RDNs ensure continuity of care between settings and support medication management and adherence.

In addition to practicing MNT, RDNs in nephrology may serve in expanded roles such as case/care managers, treatment options or kidney disease educators, quality improvement specialists, pharmaceutical clinical specialists/liaisons, managers, or executives. RDNs also may have operations, finance, research, education, or business development responsibilities.

The Academy's Renal Practice Group (RPG) provides resources, advocacy, and networking for practitioners in nephrology nutrition. The Renal Nutrition Forum is published 3 times per year, providing continuing education articles and patient-oriented resources. RPG's website (www.renalnutrition.org) houses a growing library of patient education materials and a collection of on-demand webinars. RDNs in nephrology nutrition are also commonly members of the National Kidney Foundation's Council on Renal Nutrition (CRN) at both national and regional or local levels. The CRN supports professional education, patient and public education, public policy, and research in nephrology. Members receive the *Journal of Renal Nutrition* and the RenaLink newsletter. The Council website (https://www.kidney.org/professionals/CRN) hosts a variety of resources.

Academy Revised 2020 SOP and SOPP For RDNs (Competent, Proficient, and Expert) in Nephrology Nutrition

An RDN can use the Academy Revised 2020 SOP and SOPP for RDNs (Competent, Proficient, and Expert) in Nephrology Nutrition (Figs 1 and 2, available at www.jandonline.org, and Fig 3) to:

- Identify the competencies needed to provide nephrology nutrition and dietetics care and services;
- Self-evaluate whether they have the appropriate knowledge, skills, and judgment to provide safe, effective, and quality nephrology nutrition and dietetics 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 nephrology nutrition and dietetics practice;
- Provide a foundation for public and professional accountability in nephrology nutrition and dietetics care and services;
- Support efforts for strategic planning, performance improvement, outcomes reporting, and assist management in the planning and communicating of nephrology nutrition and dietetics services and resources;
- Enhance professional identity and skill in communicating the nature of nephrology nutrition and dietetics care and services;
- Guide the development of nephrology nutrition and dietetics-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 nephrology nutrition and dietetics, 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 nephrology nutrition is learning the principles that underpin this focus area and is developing knowledge, skills, judgment and gaining experience for safe and effective nephrology nutrition 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 the focus area of nephrology nutrition must accept the challenge of becoming familiar with the body of knowledge, practice guidelines, and available resources to support and ensure quality nephrology nutrition-related nutrition and dietetics practice. The competent-level RDN will likely begin practice in nephrology nutrition by caring for a subset of patients/clients within the spectrum of kidney disease, such as in a dialysis center or a kidney transplant program. The competent-level nephrology RDN functions as a member of the interdisciplinary team in the practice setting and may educate team members of other disciplines on the nutritional aspects of nephrology care.

At the proficient level, an RDN has developed a more in-depth understanding of nephrology nutrition practice and is more skilled at adapting and applying evidence-based guidelines and best practices than at the competent level. This RDN is able to modify practice according to unique situations (eg, addressing comorbidities impacting CKD or ESKD care; renal replacement therapies; and tailoring to population or age group, ethnic or cultural group, or socioeconomic limitations). The RDN at the proficient level is gaining the experience, knowledge, and skills needed to successfully obtain the CSR from the Commission on Dietetic Registration. The CSR credential recognizes specialized knowledge and practice and signifies proficiency in the provision of nephrology nutrition services in numerous practice settings or populations (eg, hemodialysis, peritoneal dialysis, transplantation, CKD) in adults and adolescents. The CSR credential may differentiate the nephrology nutrition practitioner to employers or among peers.

A proficient-level RDN in nephrology nutrition may be developing expertise in specific aspects of nutritional management and care of patients/clients with kidney disease, such as mineral and bone disorder, anemia, malnutrition, dialysis adequacy, or specific renal replacement therapies. The proficient RDN may lead quality improvement, patient education, or research activities within the facility or may participate in similar activities at a department or organization level.

At the expert level, the RDN thinks critically about nephrology nutrition and dietetics, 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, experience, and critical thinking. Essentially, practice at the expert level requires the application of composite nutrition and dietetics knowledge, with practitioners drawing not only on their practice experience, but also on the experience of the nephrology nutrition RDNs in various disciplines and practice settings. Expert RDNs, with their extensive experience and ability to see the significance and meaning of nephrology nutrition and dietetics within a contextual whole, are fluid and flexible, and have considerable autonomy in practice. They not only develop and implement nephrology nutrition and dietetics services; they also manage, drive and direct clinical care; conduct and collaborate in research and advocacy; accept organization leadership roles; engage in scholarly work; guide or lead IDTs; and lead the advancement of nephrology nutrition and dietetics practice.

Expert-level RDNs in nephrology nutrition develop, lead, and manage projects or initiatives that have a broad impact on the organization, the community, the population, or the profession. The expert-level RDN in nephrology nutrition may participate in the development of organization-approved protocols pertinent to nutrition, such as for adjusting kidney disease-related medications based on analysis of the nutrition assessment and biochemical parameters. In addition to providing nutrition care and services for specific CKD population(s), the expert nephrology RDN may provide recommendations for the overall care or treatment of the patient to the IDT or other providers, may teach other members of the IDT, or may participate in the development of organization policies, benchmarking, or quality management to support nephrology nutrition. The expert RDN identifies opportunities to mentor others and serves in leadership roles in facilities, organizations, workgroups, or government to advance the profession and practice of nephrology nutrition.

Indicators for the SOP and SOPP for RDNs in Nephrology Nutrition are measurable action statements that illustrate how each standard can be applied in practice (Figures 1 SOP and 2 SOPP, available at www.jandonline.org). Within the SOP and SOPP for RDNs in Nephrology Nutrition, an "X" in the competent column indicates that an RDN who is caring for patients/clients is expected to complete this activity or seek assistance to learn how to perform at the level of the standard. A competent RDN in nephrology nutrition could be an RDN starting practice after registration with 1 year of clinical experience or an experienced RDN who has recently assumed responsibility to provide nephrology nutrition care for patients/clients (eg, patients/clients on dialysis; pre- and post-transplantation; with CKD not yet on dialysis or choosing conservative management; with AKI; or with varying stages of CKD in acute or long-term care settings).

An "X" in the proficient column indicates that an RDN who performs at this level has a deeper understanding of

nephrology nutrition and dietetics and has the ability to modify or guide therapy to meet the needs of patients/clients in various situations (eg, providing care to patients/clients from multiple populations or on varied renal replacement therapies; caring for patients/clients with complex comorbidities; providing recommendations for patients/clients with complications of CKD treatment, such as mineral and bone disorder, malnutrition, failure to thrive).

An "X" in the expert column indicates that the RDN who performs at this level possesses a comprehensive understanding of nephrology nutrition and dietetics and a highly developed range of skills and judgments acquired through a combination of experience and education. The expert RDN builds and maintains the highest level of knowledge, skills, and behaviors, including leadership, vision, and credentials.

Standards and indicators presented in Figures 1 and 2 (available at www.jandonline.org) in boldface type originate from the Academy's Revised 2017 SOP in Nutrition Care and SOPP for RDNs[3] 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 nephrology nutrition 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 Nephrology Nutrition 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 Nephrology Nutrition at determined intervals to evaluate their individual focus area knowledge, skills, 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 nephrology nutrition RDNs to better use these Standards as part of the *Professional Development Portfolio* recertification process,[46] 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 5-year recertification cycle incorporates the use of essential practice competencies for determining professional development needs.[47] In the three-step process, the credentialed practitioner accesses 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 over the 5-year period. The Professional Development Evaluation (step 3) guides self-reflection and assessment of learning and how it is applied. 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 https://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.[48] RDNs should collaborate with other RDNs in nephrology nutrition as learning opportunities and to promote consistency in practice and performance and continuous quality improvement. See Figure 6 for role examples of how RDNs in different roles, at different levels of practice, may use the SOP and SOPP in Nephrology Nutrition.

In some instances, components of the SOP and SOPP for RDNs in Nephrology Nutrition 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.[49] 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 nephrology nutrition RDNs in practice settings and professional activities that enhance patient/client/population care or services can be used to illustrate outstanding practice models.

Future Directions

The SOP and SOPP for RDNs in Nephrology Nutrition are innovative and dynamic documents. Future revisions will reflect changes and advances in practice, changes to dietetics education standards, regulatory changes, and outcomes of practice audits. Continued clarity and differentiation of the three practice levels in support of safe, effective, efficient, equitable, and quality

Role	Examples of use of SOP and SOPP documents by RDNs in different practice roles[a]
Clinical practitioner, dialysis center	A registered dietitian nutritionist (RDN) working in a dialysis center is seeing more patients with multiple comorbidities (eg, diabetes) complicating care of their end-stage kidney disease (ESKD). The RDN uses the Standards of Practice (SOP) and Standards of Professional Performance (SOPP) for RDNs in Nephrology Nutrition, and consults with a more experienced nephrology nutrition RDN colleague to create a personal learning plan for developing expertise and advancing practice in the care of patients/clients with ESKD and chronic kidney disease (CKD). The development plan includes a goal of obtaining Board Certification as a Specialist in Renal Nutrition (CSR).
Clinical practitioner, kidney transplant center	An RDN working in a kidney transplant center is evaluating patients/clients with CKD/ESKD in preparation for transplantation and following patients and living donors post-transplantation. Because this population has multiple complex comorbidities and conditions, the RDN periodically reviews the SOP and SOPP in Nephrology Nutrition and included resources with the goal of achieving the expert-level indicators for quality and safe practice and for career advancement.
Clinical practitioner, post-acute and long-term care	An RDN consultant to a long-term care facility notices an increase of residents receiving in-center hemodialysis as a result of ESKD. The RDN refers to the SOP and SOPP in Nephrology Nutrition to enhance knowledge and skills to guide assessment and plan of care decision making for these individuals. The RDN reviews the resources identified in the article and indicators to enhance knowledge and identify areas for continuing education. The RDN contacts an RDN colleague at the dialysis center to review nutrition care plans and diet orders for necessary modification considering resident's menu/snack/dining preference options to support nutritional needs.
Clinical practitioner, in-patient care	An RDN working in a community hospital sees patients/clients with acute kidney injury (AKI) requiring dialysis. The RDN recognizes the need for more background with this diagnosis and reviews available published practice guidelines and nutrition resources for individualized medical nutrition therapy application. The RDN uses the SOP and SOPP in Nephrology Nutrition to evaluate current knowledge, skills, experience, and competence for identifying areas to strengthen. The RDN consults with an expert-level RDN in nephrology nutrition to gain more insight on the needs and nutrition care for individuals with AKI and for continuing education recommendations.
Clinical practitioner, outpatient/ private practice	A private practice RDN receives physician referrals to provide nutrition consultations to patients/ clients with CKD in person or via telehealth. The RDN consults the SOP and SOPP in Nephrology Nutrition to become more familiar with the knowledge, skills, and resources needed to serve this population. The RDN also uses the resources to identify expanding opportunities such as supermarket tours to provide services to CKD patients/clients. The RDN monitors all relevant state laws and regulations, the Academy telehealth resources, and CMS regulations to guide practice. The RDN identifies when an RDN with more expertise in nephrology nutrition needs to be consulted or to make a referral for assuring quality care.
Food and nutrition services manager/director	An RDN food and nutrition director at the community hospital maintains a contract with a home-delivered meals program that serves participants with special diet needs, including several who have CKD. The RDN ensures that meals comply with the program's nutrition guidelines and participants' diet orders, using the hospital's diet manual. The RDN reviews the SOP and SOPP in Nephrology Nutrition to identify resources on CKD and needs for individuals on dialysis. The RDN consults with the RDN at the community's dialysis center for guidance on menu options and resources for recipe development and modifications.
Researcher	An RDN working in a research setting is awarded a grant to document the impact of nutrition interventions provided by an RDN on the health outcomes of individuals with CKD. The RDN uses the SOP and SOPP in Nephrology Nutrition in consultation with proficient- and expert-level nephrology RDNs as a resource in designing the research protocol. The SOP and SOPP also identifies areas for staff development or collaboration with a colleague more experienced in nephrology nutrition research.
Faculty, nutrition and dietetics education program	An RDN faculty member reviews the SOP and SOPP in Nephrology Nutrition to gain additional familiarity with the role of the nephrology RDN in practice to expand lecture content and assigned readings for students. The RDN also contacts a nephrology nutrition RDN for key principles, practice guidelines and tips, and nephrology nutrition practitioner highlights before developing lectures and assignments.

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

Figure 6. Role examples of Standards of Practice (SOP) and Standards of Professional Performance (SOPP) for Registered Dietitian Nutritionists (RDNs) (Competent, Proficient, and Expert) in Nephrology Nutrition.

practice in nephrology nutrition remains an expectation of each revision to serve tomorrow's practitioners and as well as patients, clients, and customers.

The field of nephrology is entering a critical period of transition and transformation. The Advancing American Kidney Health Initiative (AAKHI), launched in 2019 by the Department of Health and Human Services, is a call to action, mandating changes, improvements, and innovations in the way kidney disease is identified and treated in the United States.[50,51] Increased focus on delaying the need for dialysis, preemptive kidney transplants, strategies to increase organ donation for transplantation, and use of home dialysis therapies is likely to create new opportunities and challenges for RDNs in nephrology nutrition.[52] New voluntary and mandatory payment models included in the AAKHI will drive accountability for outcomes to care providers and organizations. The role of MNT and RDNs has significant potential to expand in the context of a larger focus on value-based care for people with CKD.[53,54] As the nephrology and dialysis industry evolves to achieve the goals of AAKHI, there is increased need for RDNs to demonstrate the impact of nutrition care and services on CKD outcomes.

The Academy's ongoing advocacy for regulatory reform governing practice in ESRD facilities may provide another opportunity or advantage to the profession. Outreach to CMS, Department of Health and Human Services via the Conditions of Participation for ESRD facilities to enable RDN independent order writing for therapeutic diets and nutrition-related services in dialysis facilities when authorized to do so by the facility and medical director or, if delegated prescribing authority by the attending physician if consistent with state law, may expand the scope of practice and impact of the RDN in dialysis.[55] Advocacy recommendations include all patient diets including therapeutic diets; orders for both standard and disease-specific medical foods/nutrition or dietary supplements, enteral and parenteral nutrition; orders for nutrition-related laboratory tests as needed to inform nutrition decisions and orders; and orders for therapeutic diets and nutrition-related services in states that do not license RDNs if delegated ordering privileges by the attending physician and consistent with state law and facility policies.

As policy changes, so will technology. The Kidney Innovation Accelerator (KidneyX) is a partnership between the Department of Health and Human Services and the American Society of Nephrology. The goal of KidneyX is to accelerate innovations in the prevention, diagnosis, and treatment of CKD, including drugs, devices, and therapies by reducing barriers to innovation and enhancing collaboration.[56] Newer and emerging therapies and tools may create additional challenges and opportunities for RDNs practicing in nephrology. Both AAKHI and KidneyX may expand the services that RDNs may provide and be paid for as well as enable new technology tools and platforms, including telehealth and remote monitoring.[57]

Infection with the novel coronavirus SARS CoV-2, which reached pandemic level in 2020, is associated with acute kidney injury in approximately 9% of total cases.[58] The incidence of AKI in patients hospitalized with acute respiratory symptoms related to COVID-19 is significantly higher and is associated with a poor prognosis, including increased risk for CKD or ESKD and mortality.[59] Evidence continues to emerge as to the impact of SARS CoV-2 on the burden of kidney disease. Expanded experience with and coverage of telehealth services[60] provided by RDNs in many nephrology settings during the COVID-19 pandemic pave the way to new opportunities for RDNs to use technology to provide MNT in expedited and personalized ways.

Summary

RDNs face complex situations every day. Addressing the unique needs of each situation and applying standards appropriately is essential to providing safe, timely, person-centered quality care and service. All RDNs are advised to conduct their practice based on the most recent edition of the Code of Ethics for the Nutrition and Dietetics Profession, 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 Nephrology Nutrition are complementary documents and are key resources for RDNs at all knowledge and performance levels. These standards can and should be used by RDNs in daily practice who provide care to individuals with kidney disease to consistently improve and appropriately demonstrate competence and value as providers of safe, effective, efficient, equitable, and quality nutrition and dietetics care and services. These standards also serve as a professional resource for self-evaluation and professional development for RDNs specializing in nephrology nutrition practice. Just as a professional's self-evaluation and continuing education process is an ongoing cycle, 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 nephrology nutrition care and services, will provide information to use in future updates and in further clarifying and documenting the specific roles and responsibilities of RDNs at each level of practice. As a quality initiative of the Academy, the RPG, and the NKF-CRN, these standards are an application of continuous quality improvement and represent an important collaborative endeavor.

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Standards of Practice for Registered Dietitian Nutritionists in Nephrology Nutrition
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 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	Evaluates health status and disease condition(s) history for application to nutrition care, including: • medical history, etiology of kidney disease, and access to health care • risk factors for kidney disease (eg, family history, diabetes, hypertension, CVD[a], ethnicity, urinary tract infection, urolithiasis, acute kidney injury) • age-related nutrition issues and comorbidities (eg, diabetes, obesity, CHF[b], hypertension, dyslipidemia, depression, GI[c] diseases, gastroparesis, oral aversion, ability to chew/swallow foods or fluids) • evidence of malnutrition (eg, weight change, abnormal rate of growth and weight gain, prolonged poor intake, abnormal laboratory trends, previous physical assessment findings) • history of tobacco use (eg, cigarettes, e-cigarettes, or smokeless tobacco); and mental health, addiction, or substance use disorder • consumption of non-food items or other pica behaviors • social determinants of health (eg, health care, community resources; availability of housing and transportation; social support)		X	X	X
	1.1B	Reviews nutrition risk screening data (eg, risk of or with malnutrition) from referring facility/provider, if available, or incorporates into nutrition assessment data collection using evidence-based screening tool (adult and pediatric)		X	X	X
	1.1C	Evaluates KDQOL[d] survey results for impact on nutrition status and goals		X	X	X
	1.1D	Evaluates psychosocial factors or issues, including family and significant others; social or cognitive impairment support; depression/anxiety, and disordered eating		X	X	X
		1.1D1	Assesses history of mental health disorders (eg, depression, bipolar disorder, anxiety, attention deficit hyperactivity disorder); seeks assistance if necessary		X	X
	1.1E	Evaluates preventive care strategies and behaviors (eg, lifestyle prevention practices, diabetes self-management)			X	X
	1.1F	Identifies potential nutrition complications related to chronic or acute conditions (eg, CKD-MBD[e], calciphylaxis, anemia, dysgeusia, gastroparesis, electrolyte imbalance, acidemia)			X	X
	1.1G	Distinguishes underlying potential for coexisting disease or nutrition conditions that may be contributing to present nutrition/disease state				X

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Figure 1. Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nephrology Nutrition Note: The terms patient, client, customer, individual, person, 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.

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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, conicity index), 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 considers limitations of reference standards related to age, race, ethnicity, or gender		X	X	X
	1.2C	Estimates and modifies anthropometric measurements, as appropriate (eg, for physical or developmental disability, amputation[s], polycystic organs, or pregnancy)		X	X	X
	1.2D	Identifies and interprets trends in anthropometric indices considering fluid status (eg, weight, growth, triceps skinfold, midarm muscle circumference, waist-hip ratio, conicity index)		X	X	X
	1.2E	Evaluates for significant changes in weight and body composition, including body habitus and weight distribution, and possible causes			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, lipid profile), and medical tests and procedures (eg, gastrointestinal study, metabolic rate)**			**X**	**X**	**X**
	1.3A	Evaluates nutrition implications of diagnostic tests and therapeutic procedures: • diagnosis and staging of CKD (including eGFR[f]) • laboratory data for CKD-related complications such as anemia, CKD-MBD, fluid imbalance, hyperglycemia, dyslipidemia, and other nutrition-related biochemical parameters • blood pressure • neuropathy or retinopathy • Net Endogenous Acid Production (NEAP) • SGA[g] score or MIS[h] • transplant graft function • electrolyte abnormalities related to immunosuppression post-transplant Seeks assistance if needed		X	X	X
	1.3B	Evaluates adequacy of dialysis (eg, urea reduction ratio, urea kinetic modeling, or Kt/V[i])		X	X	X
		1.3B1	Evaluates issues related to dialysis access and dialysis prescription that have potential to affect nutritional status		X	X
		1.3B2	Applies critical thinking and experience to evaluate inadequately delivered dialysis, including viability of dialysis access, prescription, and treatment modality		X	X
	1.3C	Applies critical thinking and experience to interpret results of tests, procedures, and evaluations; and to identify additional data to consider in assessment				X
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	Evaluates body composition measures validated for CKD populations (eg, fat and muscle stores, arm anthropometrics, SGA)		X	X	X
	1.4B	Uses NFPE that includes, but is not limited to, oral and perioral structures; skin and related structures; alterations in taste, smell, and dentition/chewing ability to identify presence or risk of malnutrition or micronutrient deficiencies		X	X	X

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Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nephrology Nutrition Note: The terms patient, client, customer, individual, person, 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.

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Each RDN:				Competent	Proficient	Expert
	1.4C		Uses critical thinking in the evaluation and physical assessment of fluid accumulation/edema in the CKD or ESKD[j] patient (eg, type, location, measurement of edema)		X	X
	1.4D		Assesses for clinical signs and symptoms of malnutrition (undernutrition), and eating disorders (eg, wasting of fat or muscle; dry, brittle, or thinning hair and nails; sarcopenia and cachexia; and decreased hand-grip strength or other measures of physical functioning related to nutrition)		X	X
	1.4E		Uses critical thinking and experience to evaluate physical assessment findings in the context of kidney disease and assessment data considerations		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	Evaluates changes in appetite or usual dietary intake patterns and contributing factors (eg, as a result of uremia, oral aversion, altered taste acuity or perceptions, drug–nutrient interactions, pica behavior, adequacy of dialysis treatment, GI problems, comorbid conditions, hospitalization, transplant, or dialysis schedule/modality); seeks assistance if needed	X	X	X
		1.5A2	Assesses daily fluid needs, considering residual kidney function, medications, dialysis prescription and modality when applicable, post-transplantation graft function, physical activity, environmental conditions, and comorbid conditions; seeks assistance if needed	X	X	X
		1.5A3	Evaluates patient's/client's/advocate's[A] understanding of nephrology nutrition principles and ability to apply to food choices and meal planning	X	X	X
		1.5A4	Assesses food and nutrient intake considering the following: • stage of CKD, RRT,[k] and life cycle stage • type and distribution of macronutrients and sources of protein • micronutrients (potassium, phosphorus, calcium, magnesium, sodium), comparing with evidence-based nutrition recommendations for individuals across the life cycle • adequacy of nutrient intake to maintain energy and nitrogen balance • history of food allergies/intolerances (eg, gluten sensitivity or intolerance, lactose intolerance)	X	X	X
		1.5A5	Assesses food and nutrient intake with an understanding of dietary modifications superimposed with comorbidities (eg, diabetes, CVD, CHF, infection, transplant)		X	X
	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	Evaluates diet experience and current meal planning approach (eg, plate method, carbohydrate counting for diabetes), previous renal or other nutrition education/counseling and dietary modifications (eg, diabetes, hypertension, dyslipidemia, weight management)	X	X	X
		1.5B2	Evaluates eating environment, access, and cultural influences or differences (eg, location, atmosphere, family/caregiver/companion/eats alone, and types/preparation of cuisine)	X	X	X

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Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nephrology Nutrition Note: The terms patient, client, customer, individual, person, 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.

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Each RDN:				Competent	Proficient	Expert
		1.5B3	Evaluates need for nutrition therapy changes based on laboratory and physical indices and comorbidities; seeks assistance if needed	X	X	X
		1.5B4	Identifies need and timing for modification of nutrition plan (eg, transitions between feeding methods)	X	X	X
		1.5B5	Evaluates need for enteral nutrition/tube feeding or parenteral nutrition including intradialytic or intraperitoneal parenteral nutrition		X	X
		1.5B6	Considers complex issues in the management of patients/clients with CKD/ESKD (eg, recovery from surgery/amputations/trauma/injury/illness, enteral or parenteral nutrition support, acute rejection post-transplantation, MIS) related to food intake, impact/changes in comorbid condition			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	Evaluates prescription or over-the-counter medications or dietary supplements, including, dose, timing, and adherence, in the context of CKD stage, RRT, and stage in life cycle: • phosphorus and potassium binders • potassium, magnesium, phosphorus, or calcium supplements • vitamin D analogs or calcimimetics • oral and injectable diabetes medications • antihypertensives • antihyperlipidemics • anti-rejection drugs • stool softeners/laxatives • vitamins and herbals Seeks assistance if needed	X	X	X
		1.5C2	Assesses safety, quality and efficacy of over-the-counter medications and dietary supplements; and evaluates actual or potential drug–nutrient and drug–drug interactions in consultation with pharmacist or other professionals, if indicated using database resources (eg, Natural Medicines Data base [https://naturalmedicines.therapeuticresearch.com/]); seeks assistance if needed	X	X	X
		1.5C3	Evaluates frequency and severity of changes in health status that require dietary supplements or medication adjustments (eg, hypo/hyperkalemia, hypo/hyperphosphatemia, hypomagnesemia, hyperparathyroidism, hyper/hypoglycemia)	X	X	X
		1.5C4	Evaluates overall medication management, including drug–drug/botanical and drug–nutrient interactions in collaboration with the interdisciplinary[B] team		X	X
	1.5D	**Knowledge, beliefs, and attitudes (eg, understanding of nutrition-related concepts, emotions about food/nutrition/health, body image, preoccupation with food 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	Evaluates behavioral mediators related to CKD and dietary intake (eg, knowledge, readiness and willingness to change, perceived or actual barriers, feelings about living with CKD, and caregiver influences on behavior)	X	X	X

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Each RDN:				Competent	Proficient	Expert
		1.5D2	Evaluates self-care skills, behaviors, health care knowledge/beliefs/attitudes from the patient's/client's/caregiver's perspective	X	X	X
		1.5D3	Evaluates patient's/client's/advocate's ability to identify evidence-based nutrition information among resources found in media and popular literature	X	X	X
		1.5D4	Evaluates various influences (eg, language, physical activity, social networks, social or cultural norms and attitudes) that may impact behavior change	X	X	X
		1.5D6	Assess risk/history of eating disorders or disordered eating pattern or factors, such as: • bingeing and purging behaviors (including fluids or ice) • abnormal mealtime behaviors (eg, drinking in place of eating, spitting out food, restrictive behaviors) • avoidance behavior (eg, eats alone, avoids social situations) • obsessive behaviors regarding meal composition		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 food and water safety, access, barriers, and availability of healthy food/meals: • appropriate food preparation resources (eg, financial, food markets/grocery stores, and equipment for safe cooking, serving, and food storage) • food environment or access (eg, use of food pantry, meal programs, living situation, transportation) • water supply and source (eg, use of well water) • plans for emergency situations/disaster events (eg, availability of appropriate food, water, and supply of medications; communication routes or sources of information) • availability of family/caregiver to assist with obtaining/preparing food, if needed	X	X	X
		1.5E2	Investigates non-apparent barriers or conflicts that would interfere with food access, selection, preparation		X	X
	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	Assesses health literacy and numeracy (eg, ability to read, write, and perform calculations)	X	X	X
		1.5F2	Identifies factors or events that may impact patient's/client's physical and cognitive abilities (eg, hospitalization, amputation, retinopathy, uremia/inadequate dialysis, anemia, change in living situation or care provider support)	X	X	X
		1.5F3	Considers results from validated or commonly accepted developmental, functional, and mental status evaluation tools (eg, Karnofsky Performance Scale, Pediatric Quality of Life inventory ADLs, frailty assessment tools, depression screening tools) that reflect cultural, ethnic, and lifestyle factors in collaboration with the interdisciplinary team		X	X
		1.5F4	Considers changes in cognitive or physical functioning that may affect ability to meet nutrition goals		X	X

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Each RDN:				Competent	Proficient	Expert
	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 patient's/client's/advocate's understanding of health condition(s) and nutrition-related effects and implications as it relates to cultural, ethnic, and religious beliefs and traditions	X	X	X
		1.5G2	Reviews/evaluates patient's/client's developmental, functional, cognitive status, and learning style/interactive abilities (visual, auditory, kinetic)	X	X	X
		1.5G3	Reviews/evaluates quality of life/end-of-life choices, including advanced directives or preferences relevant to the nutrition plan of care	X	X	X
1.6	***Comparative standards:* Uses reference data and standards to estimate nutrient needs and recommended body weight, body mass index, and desired growth patterns (eg, Academy, Academy EAL,[l] KDOQI,[m] KDIGO,[n] DOPPS,[o] NHANES,[p] USRDS[q])**			**X**	**X**	**X**
	1.6A		**Identifies and evaluates the most appropriate reference data 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 with appropriate criteria, population-based surveys, standards for determining nutrition-related recommendations for CKD stage, RRT, and life cycle stage: • energy needs/balance • macronutrient and micronutrient needs • fluid and electrolyte balance • mineral and bone disorder • adequacy of dialysis, when applicable Seeks assistance if needed	X	X	X
		1.6A2	Identifies reference standards to be included in organization's/corporate's/system's assessment tools		X	X
		1.6A3	Recognizes and takes the lead in incorporating guidelines from other practice areas (eg, nutrition support, diabetes, pediatrics) into assessment guidelines and practices for renal care settings in collaboration with interdisciplinary team			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 with current age-appropriate physical activity guidelines (https://health.gov/our-work/physical-activity/current-guidelines)	X	X	X
	1.7B		Assesses effect of current treatment plan on usual activity level, ability to perform ADLs, and achievement of developmental milestones for pediatric population	X	X	X
	1.7C		Assesses factors influencing access to physical activity (eg, environmental safety, walkability of neighborhood, proximity to parks/green space, access to physical activity facilities/programs)	X	X	X
	1.7D		Evaluates factors limiting physical activity (eg, vision, mobility, dexterity, neuropathy, or medication contraindications) and physical inactivity (eg, television/screen and other sedentary activity time)	X	X	X

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Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nephrology Nutrition Note: The terms patient, client, customer, individual, person, 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
1.8	**Collects data and reviews data collected or documented 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	Obtains and integrates data from members of the interdisciplinary team and other health care practitioners (eg, physician rounding or visit notes; nursing notes regarding fluid, potassium, and anemia management; social worker notes regarding mental health or access to food; dialysis treatment records)		X	X	X
	1.8B	Reviews collected data from all sources to identify factors that impact nutrition and health status and CKD care and management in the context of interdisciplinary care: • complications of CKD, RRT, or post-transplantation • micro- and macrovascular complications of diabetes (eg, retinopathy, peripheral neuropathy, gastroparesis, wounds) • actual/potential GI side effects (eg, dry mouth, taste change, nausea or vomiting, constipation, or diarrhea) • behavioral health issues, including substance abuse • preventive care behaviors (eg, routine vaccinations, annual dental examinations, routine health screenings) • actual risk for cardiovascular complications (eg, hypertension, high ultrafiltration rate, intradialytic hypotension, CHF) • presence of barriers impacting treatment plans and outcomes (eg, finances/resources, transportation, communication, housing) nutrition concerns (eg, at-risk or with malnutrition, food insecurity)			X	X
1.9	**Uses collected data to identify possible problem areas for determining nutrition diagnoses**			**X**	**X**	**X**
	1.9A	Evaluates and prioritizes nutrition-related problems (eg, intake, biochemical abnormalities, behavior change, weight change, findings from NFPE or SGA, malnutrition, physical activity, medication or treatment adherence) for factors that influence health and nutrition status		X	X	X
	1.9B	Evaluates more complex issues related to food intake and clinical complications (eg, presence of nutrition risk factors or malnutrition and multiple complications) for prioritizing nutrition diagnoses			X	X
		1.9B1	Evaluates complex food-, medication-, or treatment-related issues, clinical complications, and current or anticipated treatment options (eg, surgery, initiation of dialysis, modality change, transplant, withdrawal of treatment, or other medical management adjustments) in prioritizing nutrition problems in collaboration with the interdisciplinary team			X
	1.9C	Evaluates and identifies nutrition risk factors for transplant (eg, malnutrition, obesity) in transplant candidates			X	X
1.10	**Documents and communicates:**			**X**	**X**	**X**
	1.10A	**Date and time of assessment**		**X**	**X**	**X**
	1.10B	**Pertinent data (eg, medical, social, behavioral)**		**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/population perceptions, values, and motivation related to presenting problems**		**X**	**X**	**X**
		1.10E1	Changes in patient/client/advocate level of understanding, food-related behaviors, readiness for change, other outcomes that dictate appropriate follow-up timing and effort	X	X	X

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Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nephrology Nutrition Note: The terms patient, client, customer, individual, person, 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
	1.10F	Patient/client adherence, as evidenced by biochemical/nutrition parameters and other indicators		X	X	X
	1.10G	Interest in kidney transplantation, or nutritional clearance and risk assessment for transplant eligibility listing when applicable			X	X
	1.10H	**Reason for discharge/discontinuation or referral, if appropriate**		**X**	**X**	**X**
		1.10H1	Pertinent nutrition information to coordinate care when status changes or patient/client transfers between settings (eg, discharge, transfer to another clinic, modality change, transplant, long-term care/skilled nursing or rehabilitation facility, daycare/school)	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

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 in nephrology nutrition care and management.

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	Uses evidence-based guidelines and protocols to organize and group data to formulate nutrition diagnosis(es); includes data relating to clinical and behavioral findings, physical function, and intake of food, nutrients, and fluid	X	X	X
	2.1B	Considers complex data related to food intake and clinical condition, including preexisting factors, complex comorbidities (eg, diabetes, dyslipidemia, hypertension, abnormal eating habits, malabsorption syndromes, or psychiatric illness) and impact of other therapies and interventions (eg, bariatric surgery), and consults the interdisciplinary team or other providers		X	X
	2.1C	Integrates complex information related to food intake, biochemical data, diagnostic tests, therapeutic procedures, and clinical complications and their management with the interdisciplinary team or in consultation with other providers			X

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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**
2.2	**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	**Evaluates assessment data to prioritize nutrition diagnosis(es) in order of importance or urgency considering:** • impact/urgency of the identified problem(s) (eg, inadequate protein or caloric intake; excessive fluid, carbohydrate, or mineral intake) • complications of comorbid diseases or conditions (eg, diabetes, hypertension, anemia, gastrointestinal disorders, cancer) • patient/client/advocate wishes and perception of importance, including palliative care • evidence-based protocols and guidelines • transplant candidacy • social determinants of health (eg, access to food, housing, access to care, social support)	X	X	X
	2.2B	Prioritizes nutrition diagnoses based on CKD and life cycle stage, RRT, comorbidities, complications, protocols, and guidelines for kidney disease and nephrology nutrition		X	X
	2.2C	Understands the importance of considering the patient's/client's/ advocate's goals and perceptions as key factors when prioritizing nutrition diagnoses		X	X
	2.2D	Prioritizes nutrition diagnoses in the setting of CKD with secondary complications and comorbidities, using advanced clinical thinking, knowledge, and experience			X
	2.2E	Leads interdisciplinary team discussions to address nutrition needs and plans of care for patients/clients with multiple complex care or transition of care issues to achieve positive outcomes			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	Communicates and confirms nutrition diagnosis(es) with the patient/client/advocate, using appropriate communication methods and clinical judgment skills (eg, consideration of complications, wishes of patient/client/advocate), consistent with medical/treatment care plan	X	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, imbalance of nutrients [NI-5.4], predicted inadequate energy intake [NI-1.4], impaired nutrient utilization [NC-2.1], increased nutrient needs [NI-5.1])	X	X	X
	2.4B	Documents and explains nutrition diagnosis(es) in order of importance and in a manner that clearly describes the patient's/client's nutrition status and needs	X	X	X
2.5	**Reevaluates and revises nutrition diagnosis(es) when additional assessment data become available**		**X**	**X**	**X**
	2.5A	Uses most current information that may impact nutrition diagnosis(es) and revises if needed in a timely manner (eg, changes in living arrangement or dialysis modality, laboratory/diagnostic tests, transplantation)	X	X	X
	2.5B	Communicates new information with nutrition implications with the patient/client/advocate and with the interdisciplinary team and other health care practitioners (eg, behavioral, medical, physical/occupational therapist)	X	X	X

Examples of Outcomes for Standard 2: Nutrition Diagnosis

- Nutrition Diagnostic Statements accurately, clearly, and concisely describe the nutrition problems of the patient/client or community
- 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 evidence-based 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 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**
	3.1A	Prioritizes nutrition diagnosis(es) considering one or more of the following based on CKD stage, RRT, and life cycle stage: • patient's/client's ability and willingness to implement and adhere to nutrition care plan • urgency of the problem and severity of nutrition risk or malnutrition, if present • presence of comorbid diseases or conditions (eg, including but not limited to prediabetes and diabetes, CVD, anemia, GI disorders, food allergies) • presence or risk of acute complications (eg, altered nutritional status, hypo/hyperkalemia, fluid imbalance, severe hypo/hypertension, hyper/hypoglycemia, metabolic acidosis/acidemia) • presence or risk for chronic complications or barriers to transplantation Seeks assistance if needed	X	X	X
	3.1B	Considers needs related to transitions of care (eg, hospitalization, transplantation, subacute, rehabilitation, or long-term care facility, and changes in treatment modalities); seeks assistance if needed	X	X	X
	3.1C	Prioritizes considering medical issues (eg, presence or risk for CKD-MBD, anemia, MIS, left ventricular hypertrophy, altered nutritional status, altered weight status or growth velocity, micro/macrovascular disease), treatment goals, patient/client/caregiver/advocate preferences and goals for plan of care		X	X
	3.1D	Considers existence of or access to emerging therapies, including nontraditional intervention(s) (eg, integrative and functional medicine therapies or behavior modification)			X
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	Identifies and applies appropriate adult and pediatric national/international evidence-based practice guidelines (eg, KDOQI, KDIGO, Academy's EAL Nutrition Practice Guidelines, Adult and Pediatric Nutrition Care Manuals) and setting-specific clinical protocols (eg, anemia management, CKD-MBD, malnutrition, dialysis adequacy, potassium management)	X	X	X

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Each RDN:				**Competent**	**Proficient**	**Expert**
	3.2B		Recognizes when it is appropriate and safe to deviate from established nephrology nutrition guidelines for person-centered care, including use of novel therapies, liberalized diet, or conservative management; seeks assistance if needed		X	X
	3.2C		Modifies application of kidney disease/nephrology nutrition guidelines based on the individual needs of the patient/client and progress of interventions, in collaboration with the interdisciplinary team		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, interdisciplinary team, and other health care professionals**			**X**	**X**	**X**
	3.4A		Serves as an integral member of the interdisciplinary team	X	X	X
		3.4A1	Recognizes specific knowledge and skills of other providers, and collaborates to provide comprehensive care	X	X	X
		3.4A2	Teaches clinical practice skills and rationales for nutrition interventions to students/colleagues and interdisciplinary team members		X	X
		3.4A3	Directs nutrition interventions for kidney disease within context of complex disease management, in collaboration with the interdisciplinary team			X
	3.4B		Considers patient/client/advocate knowledge, self-care skills, behaviors/habits, and willingness to implement nutrition intervention to achieve goals	X	X	X
	3.4C		Refers patient/client to appropriate health care provider for problems outside scope of practice	X	X	X
	3.4D		Maintains communications with community setting (eg, assisted living/long-term care) or program(s) (eg, home care, home delivered meals) providing services for orientation/problem-solving on behalf of patient/client	X	X	X
	3.4E		Coordinates and manages care with the patient/client/advocate in collaboration with interdisciplinary team		X	X
3.5	**Works with patient/client/advocate/population, and caregivers to identify goals, preferences, discharge/transitions of care needs, plan of care and expected outcomes**			**X**	**X**	**X**
	3.5A		Develops clear and measurable goals, outcomes, and plan(s) with patient/client/advocate through shared decision making and consideration of readiness to change and barriers to successful implementation	X	X	X
	3.5B		Considers quality of life/end-of-life choices, including advanced directives or preferences in developing goals and the nutrition plan of care	X	X	X
	3.5C		Considers patient/client/advocate understanding of CKD treatment options (dialysis modality, transplant, conservative management, palliative care) and their effects on nutrient needs and food choices		X	X
	3.5D		Plans nutrition interventions with the goal of minimizing treatment-related side effects, treatment delays, and the need for emergency department visits or hospital admission/readmission		X	X
	3.5E		Develops and implements strategies to address lapses in self-care management or behaviors and identifies recovery strategies		X	X
	3.5F		Directs nutrition management of acute or long-term complications within the context of integrated care (eg, diabetes, CVD, surgery, infection, MIS, transplant)			X

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Each RDN:				**Competent**	**Proficient**	**Expert**
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 for CKD stage, RRT, and life cycle stage considering: • medical conditions, including food allergies/intolerances and treatment goals • nutrition diagnosis(es) and priority(ies) • usual nutrient/dietary intake patterns, including medical foods/nutrition supplements and calories absorbed from PD dialysate • cultural, religious, and other influences or beliefs • pharmacotherapy, including over-the-counter medications, and dietary supplements • route of nutrition, including enteral/parenteral nutrition therapies • physical activity, functional status, and psychomotor development • psychosocial and behavioral factors • nutrition counseling/education needs, including health literacy and numeracy, language barriers, and visual or hearing impairment • access to food, food preparation skills or assistance, and meals eaten away from home Seeks assistance if needed		X	X	X
	3.6B	Collaborates with patient/client/advocate to individualize the nutrition prescription		X	X	X
	3.6C	Reviews medications commonly used in CKD (eg, mineral bone disorder, anemia management, growth failure, immunosuppression)		X	X	X
		3.6C1	Recognizes the impact and interactions of pharmacotherapy including dietary supplements, considering nutrition, physical activity, RRT, side effects, and biochemical markers		X	X
		3.6C2	Recognizes need for adjustment of pharmacotherapy including dietary supplements based on integration of nutrition, physical activity, RRT, treatment schedule, personal routine, medication side effects, trough levels of immunosuppressive agents, and ongoing laboratory monitoring and response; and makes recommendations to the interdisciplinary team or physician			X
	3.6D	Recommends plan for enteral/parenteral nutrition prescription collaborating with medical provider/interdisciplinary team as indicated		X	X	X
		3.6D1	Recommends enteral nutrition/tube feeding or parenteral nutrition based on nutritional status, laboratory data, age, stage of CKD, and treatment modality; seeks assistance if needed	X	X	X
		3.6D2	Recommends modular components for enteral feedings as needed to meet nutritional needs and maintain optimal biochemical parameters (eg, protein status, potassium, phosphorus, calcium) and fluid balance; seeks assistance if needed		X	X
		3.6D3	Recommends specialized nutrition support therapy (eg, intraperitoneal, or intradialytic parenteral nutrition); makes recommendations about formula composition in consultation with pharmacist		X	X

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Each RDN:				**Competent**	**Proficient**	**Expert**
3.7	**Defines time and frequency of care including intensity, duration, and follow-up**			**X**	**X**	**X**
	3.7A	Uses evidence-based guidelines (eg, KDOQI, KDIGO, EAL) and regulatory guidelines (eg, Conditions for Coverage), individual needs, established goals and outcomes, and expected response to intervention(s) to determine duration and follow-up		X	X	X
		3.7A1	Considers expected changes in nutritional status and progress toward nutrition outcomes (eg, growth/ developmental changes, changes in feeding mode, re-assessment of transplant eligibility)	X	X	X
		3.7A2	Considers severity of nutritional issues, or pending medical or behavioral health interventions that are influenced by or may influence nutrition status		X	X
		3.7A3	Develops guidelines for timing of intervention and follow-up considering organization/program policies, CKD practice guidelines, and federal and state regulations			X
3.8	**Uses standardized terminology for describing interventions**			**X**	**X**	**X**
	3.8A	Uses the standardized terminology in the online eNCPT or follows facility/ organization requirements		X	X	X
3.9	**Identifies resources and referrals needed**			**X**	**X**	**X**
	3.9A	Identifies age and culturally-appropriate resources and tools to assist patient/ client/advocate with management of CKD, or transplantation (eg, support groups, peer mentoring, transportation, health care services, meal programs, meal ingredient/delivery services, medication assistance programs, community outreach programs, education resources, online resources)		X	X	X
	3.9B	Identifies and facilitates referrals to programs or providers (eg, transplant center, behavioral health, weight management/bariatric surgery program, endocrinologist, ophthalmologist, podiatrist, dentist, physical therapist, vocational rehabilitation) to assist patient/client/advocate with CKD-related issues		X	X	X
	3.9C	Creates and maintains a list of nutrition and other resources specific to patient/ client population in collaboration with interdisciplinary team members to support education and transitions of care/support from the community		X	X	X
Implements the Nutrition Intervention/Plan of Care:						
3.10	**Collaborates with colleagues, interdisciplinary team, and other health care professionals**			**X**	**X**	**X**
	3.10A	Facilitates and fosters active communication, learning, partnerships, and collaboration with the nephrology team and other health care practitioners; seeks assistance if needed		X	X	X
	3.10B	Recommends to health care provider when medication adjustment is warranted (eg, based on biochemical indicators of CKD-MBD, chewing/ swallowing ability, GI/tolerance issues, potassium management, anemia, glucose management); seeks assistance if needed		X	X	X
	3.10C	Partners or collaborates within an interdisciplinary team and with other providers as indicated to recommend changes to the renal protocols consistent with regulations and facility policies to manage nutrition-related conditions and support therapies			X	X
	3.10D	Identifies and seeks opportunities for external and interagency collaboration, specific to the patient's/client's/advocate's/caregiver's needs				X

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Each RDN:					**Competent**	**Proficient**	**Expert**
	3.10E	Serves as resource to other practitioners and the interdisciplinary team on nutrition-related care and management for patients/clients with multiple complex medical conditions					X
3.11	**Communicates and coordinates the nutrition intervention/plan of care**				**X**	**X**	**X**
	3.11A	Communicates plan of care to interdisciplinary team and other health care professionals/agencies/facilities (eg, long-term care facility, assisted living) to coordinate nutrition care			X	X	X
	3.11B	Ensures communication of nutrition plan of care and transfer of related data between care settings (eg, home health, acute care, ambulatory care, transplant, dialysis facility, or long-term care facility) as needed			X	X	X
	3.11C	Ensures patient/client and, if applicable, advocate understands and can articulate goals and other relevant aspects of the plan of care			X	X	X
3.12	**Initiates the nutrition intervention/plan of care**				**X**	**X**	**X**
	3.12A	**Uses approved clinical privileges, physician/nonphysician practitioner[C]-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, 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	Collaborates with physician and interdisciplinary team to implement approved facility policies and protocols to address nutrition-related conditions, such as anemia, mineral and bone disorders, hypo/hyperkalemia, hypo/hyperphosphatemia, hypomagnesemia, and malnutrition and provide recommendations for use of medications, dietary supplements, and herbals		X	X
			3.12A1ii	Uses advanced judgment and reasoning, which may include evaluation of data from laboratory monitoring, to adjust and implement pharmacotherapy plan following provider or facility-approved protocols and policies			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	Collaborates with physician and interdisciplinary team to manage enteral/parenteral nutrition and specialized nutrition support therapy (eg, intradialytic or intraperitoneal parenteral nutrition), including formula selection and adjustment based on laboratory results, consistent with privileges or physician-approved protocols or delegated orders		X	X

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Each RDN:				**Competent**	**Proficient**	**Expert**
		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		Identifies tools for nutrition education to support the intervention/ plan of care that are appropriate to the patient's/client's or advocate's educational needs, developmental stage, learning style, and method of communication; uses interpersonal teaching, training, coaching, counseling, or technological approaches, as appropriate	X	X	X
	3.12C		Incorporates stages of behavior change as a guide to assess the patient's/ client's readiness to learn and adjusts counseling style accordingly; includes family/caregiver as appropriate when working with children or individuals with special health care needs; seeks assistance if needed	X	X	X
	3.12D		Formulates and adapts nutrition education to the developmental stage of the patient/client and for advocate when applicable and makes changes to the intervention as appropriate		X	X
	3.12E		Uses experience, advanced knowledge, and critical thinking to individualize the treatment and education strategy for complex interventions in complicated, unpredictable, or dynamic situations (eg, complex comorbidities, medical or psychological instability)			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, fluid balance, biochemical, behavioral, and lifestyle factors using prescribed/standardized format	X	X	X
3.15	**Documents:**					
	3.15A		**Date and time and individuals involved**	**X**	**X**	**X**
	3.15B		**Specific and measurable treatment goals and expected outcomes**	**X**	**X**	**X**
	3.15C		**Recommended interventions**	**X**	**X**	**X**
		3.15C1	Recommended and implemented interventions as applicable, as developed by the RDN and interdisciplinary team	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**
		3.15F1	Understanding/comprehension of risks and benefits	X	X	X
	3.15G		**Barriers to change**	**X**	**X**	**X**
		3.15G1	Influencing factors or barriers affecting ability or willingness to implement and adhere to nutrition care plan (eg, living environment, psychosocial factors, emotional intelligence, cognitive development/impairment, change in mental or physical ability, financial status, access to food)	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**

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 interdisciplinary 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 with adjustment as needed
- Nutrition intervention/plan of care is dynamic and is modified to help patient/client achieve optimal outcomes through progression of CKD, changes in RRT, and through the life cycle
- 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 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	Verifies patient's/client's/advocate's understanding of nutrition intervention by: • patient/client/advocate verbalization of goals • selection of appropriate foods, menus, or food preparation techniques • taking medications/dietary supplements as prescribed	X	X	X
		4.1A2	Determines whether barriers to understanding are present and impacting the patient's/client's/advocate's acceptance of the nutrition intervention/plan of care	X	X	X
		4.1A3	Evaluates nutrition intervention that includes patient-/client-centered goals	X	X	X
		4.1A4	Reassess patient's/client's stage of behavior change and learning style to evaluate need to revise nutrition intervention and plan of care	X	X	X
	4.1B	**Determines whether the nutrition intervention/plan of care is being implemented as prescribed**		**X**	**X**	**X**
		4.1B1	Communicates and collaborates with interdisciplinary team to monitor and assess progress with plan of care or evaluate reasons for lack of progress toward goals	X	X	X
		4.1B2	Evaluates nutrition intervention in the face of multifactorial clinical situations (eg, malnutrition/protein energy wasting, food allergies and intolerances, and cultural factors along with multiple comorbid conditions); seeks assistance if needed	X	X	X

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Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nephrology Nutrition Note: The terms patient, client, customer, individual, person, 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**
		4.1B3	Evaluates nutrition intervention in the face of complex clinical situations (eg, surgery/amputation, wounds, infection, transplantation, calciphylaxis, unstable blood glucose)		X	X
4.2	**Measures outcomes:**			**X**	**X**	**X**
	4.2A	**Selects the standardized nutrition care measurable outcome indicator(s) such as, but not limited to:**		**X**	**X**	**X**
		4.2A1	Anthropometric measures (eg, weight, intradialytic weight gain, BMI, waist circumference, waist/hip ratio, rate of weight change, growth, and development)	X	X	X
		4.2A2	Body composition measures (eg, muscle and fat mass, triceps skinfold, midarm muscle circumference, hand grip strength)	X	X	X
		4.2A3	Laboratory measures (eg, albumin, nPCR[r]/nPNA[s], parathyroid hormone, calcium, phosphorus, potassium, carbon dioxide, sodium, glucose/hemoglobin A1c, lipids); seeks assistance if needed	X	X	X
		4.2A4	Quality of life measures (eg, KDQOL scores, Pediatric Quality of Life score, activities of daily living)	X	X	X
		4.2A5	Treatment-related markers or test results (eg, Kt/V or urea reduction ratio, ultrafiltration rate, peritoneal equilibration test, access flow, immunosuppression); seeks assistance if needed	X	X	X
		4.2A6	Treatment or disease state markers in complex clinical situations (eg, calcific uremic arteriolopathy, acute graft rejection, autoimmune disorders)		X	X
		4.2A7	Health care utilization measures for nutrition and CKD management outcomes (eg, consistent delivery or access to care, treatment-related side effects, incidence of infections and hospitalizations, and resource utilization)			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	Identifies unintended consequences, use of inappropriate methods of achieving goals (eg, erratic use of medications or dietary supplements, self-imposed dietary restrictions), and actual or potential adverse effects related to complex problems and interventions		X	X
	4.2C	Monitors intended effects and potential adverse effects of pharmacological and nonpharmacological treatment (eg, unintentional weight loss, biochemical abnormalities)		X	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**
		4.3A1	Compares individual patient/client data trends with accepted targets based on national, state, and local public health and population-based data (eg, ESRD[t] Networks, USRDS, DOPPS, NAPRTCS,[u] MAT,[v] HP2020[w])	X	X	X

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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**
	4.3B	**Evaluates impact of the sum of all interventions on overall patient/client/population health outcomes and goals**		**X**	**X**	**X**
		4.3B1	Assesses need for continuation of interventions based on outcomes and clinical data (eg, weight or biochemical parameters stable within desired range necessitating reevaluation of need for nutrition supplement or parenteral nutrition) with interdisciplinary team	X	X	X
		4.3B2	Completes comprehensive analysis of indicators for each identified problem compared with protocols and reference standards for impact on patient/client health outcomes and goals		X	X
		4.3B3	Completes a trending analyses of the indicators and how they correlated with each other, to determine and evaluate the complexity of problems and influence on patient/client/population health outcomes			X
	4.3C	**Evaluates progress or reasons for lack of progress related to problems and interventions**		**X**	**X**	**X**
		4.3C1	Elicits feedback from patient/client/advocate about progress with nutrition- or health-related behavior change	X	X	X
		4.3C2	Applies theories of behavior change to evaluate and address progress/lack of progress with goals and interventions	X	X	X
		4.3C3	Consults with the interdisciplinary team and other health care practitioners	X	X	X
		4.3C4	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
		4.3C5	Leads discussions with the IDT to address needs and interventions for patients/clients with complex needs			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	Identifies appropriate sources for evidence of problems or adherence (eg, food choices, food logs, 24-hour food recall, laboratory results, objective data, NFPE/SGA)	X	X	X
		4.3D2	Uses direct observation, interview, or other methods to evaluate patient/client outcomes (eg, laboratory data, self-monitoring of blood glucose results, treatment data, physical, social, cognitive, environmental factors, ADLs, and growth and development) that explain lack of response or could influence response to nutrition intervention	X	X	X
	4.3E	**Supports conclusions with evidence**		**X**	**X**	**X**
		4.3E1	Clearly identifies subjective and objective patient-/client-centered evidence to support conclusions	X	X	X
4.4	**Adjusts nutrition intervention/plan of care strategies, if needed, in collaboration with patient/client/population/advocate/caregiver and interdisciplinary team**			**X**	**X**	**X**
	4.4A	**Improves or adjusts intervention/plan of care strategies based on outcomes data, trends, best practices, and comparative standards**		**X**	**X**	**X**
	4.4B	Adjusts intervention strategies as needed to address individual patient/client needs (eg, change in CKD stage or RRT, changes in medications, change in living/care situation, progress/change in goal, change in health status, change in functional status); seeks assistance if needed		X	X	X

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Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nephrology Nutrition Note: The terms patient, client, customer, individual, person, 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**
	4.4C		Addresses underlying factors interfering with meeting the CKD and nutrition intervention goals (eg, access to resources, lack of insurance, cost of medications, treatment adherence)	X	X	X
	4.4D		Modifies intervention strategies as appropriate to address patient/client needs, new/emerging situations (such as comorbidities and complications), and results of any further testing or change in treatment modality		X	X
	4.4E		Arranges for additional resources and support services (eg, training of direct care providers, collaboration with health care professionals) for implementing nutrition intervention/plan of care with patient/client/advocate, balancing multiple situations (eg, emergency situations, or clinical complications)		X	X
	4.4F		Tailors tools and methods to ensure desired outcomes reflect the patient's/client's developmental age, social, physical, environmental factors, and CKD nutrition and treatment goals		X	X
	4.4G		Adjusts intervention strategies by drawing on practice experience, knowledge, clinical judgment, and research-/evidence-based practice about the patient/client populations in complicated and unpredictable situations (eg, pregnancy, eating disorders, cancer, pediatric conditions, gastroparesis)			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**
		4.5C1	Reviews, understands, and documents criteria to which the indicator is compared (ie, nutrition prescription/goal, reference standard, or clinical judgment)		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, reflecting involvement of interdisciplinary team**	**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 knowledge, behavior, food, or nutrient intake)
  - Clinical and health status outcomes (eg, change in laboratory values, body weight, blood pressure, risk factors, signs and symptoms, clinical status, infections, complications, morbidity, and mortality)
  - Patient/client/population-centered outcomes (eg, quality of life, satisfaction, self-efficacy, self-management, functional ability)
  - Health care utilization and cost effectiveness outcomes (eg, RRT choice/progression, 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

[A]**Advocate:** An *advocate* is a person who provides support 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[13] and the Centers for Medicare and Medicaid Services, Hospital Conditions of Participation[7]).

[B]**Interdisciplinary**: The term *interdisciplinary* is used in this evaluation resource as a universal term. It includes a diverse group of team members (eg, physicians, nurses, dietitian nutritionists, pharmacists, psychologists, social workers, and occupational and physical therapists), depending on the needs of the patient/client. Interdisciplinary could also mean interprofessional team or multidisciplinary team.

[C]**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, 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.[7,8] 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.[10,11]

Acronyms

[a]CVD = cardiovascular disease
[b]CHF = congestive heart failure
[c]GI = gastrointestinal
[d]KDQOL = Kidney Disease Quality of Life Survey
[e]CKD-MBD = chronic kidney disease-mineral and bone disorder
[f]eGFR = estimated glomerular filtration rate (as measured by blood analysis, 24-hour urinary creatinine clearance, or specialty testing such as Glofil)
[g]SGA = subjective global assessment
[h]MIS = malnutrition inflammation syndrome
[i]Kt/V = a number used to quantify hemodialysis and peritoneal dialysis treatment adequacy
[j]ESKD = end-stage kidney disease (replacing older term of ESRD)
[k]RRT = renal replacement therapy (hemodialysis, peritoneal dialysis, and transplantation)
[l]EAL = Academy Evidence Analysis Library
[m]KDOQI = Kidney Disease Outcomes Quality Initiative
[n]KDIGO = Kidney Disease Improving Global Outcomes
[o]DOPPS = Dialysis Outcomes and Practice Patterns Study
[p]NHANES = National Health and Nutrition Examination Study
[q]USRDS = US Renal Data System
[r]nPCR = normalized protein catabolic rate
[s]nPNA = normalized protein equivalent of nitrogen appearance
[t]ESRD = end-stage renal disease (increasingly replaced by ESKD)
[u]NAPRTCS = North American Pediatric Renal Trials and Collaboration Studies
[v]MAT = measurement assessment tool
[w]HP2020 = Healthy People 2020

Figure 1. *(continued)* Standards of Practice for Registered Dietitian Nutritionists (RDNs) in Nephrology Nutrition Note: The terms patient, client, customer, individual, person, 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 Nephrology Nutrition
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 their area(s) of practice**		**X**	**X**	**X**
	1.1A	Complies with state licensure or certification laws and federal or state regulations, if applicable, including telehealth and continuing education requirements	X	X	X
	1.1B	Complies with applicable federal or state regulations, accreditation standards, and payment policies for providers and institutions/programs	X	X	X
1.2	**Performs within individual and statutory scope of practice and applicable federal or state laws and regulations, accreditation standards, or applicable nephrology standards**		**X**	**X**	**X**
	1.2A	Understands and works within scope of practice in nephrology nutrition; assures: • job description/contract specifications comply with defined scope of practice, employer requirements, identified role, and professional responsibility • consistency with credentialing requirements (eg, Board Certified Specialist in Renal Nutrition [CSR] or Pediatric Nutrition [CSP], Certified Diabetes Care and Education Specialist [CDCES], Certified Clinical Transplant Dietitian [CCTD])	X	X	X
1.3	**Adheres to sound business and ethical billing practices applicable to the role and setting**		**X**	**X**	**X**
	1.3A	Ensures ethical and accurate reporting and billing of nephrology nutrition services (eg, MNT,[a] kidney disease education, diabetes management/ education)	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 [NQF], Institute for Healthcare Improvement, NIH,[b] KDIGO,[c] KDOQI,[d] HP2020[e]) to improve the quality of services provided and to enhance customer-centered services**		**X**	**X**	**X**
	1.4A	Reflects national standardized and consensus-based nephrology guidelines in policies and procedures and other programs (eg, CMS,[f] KDOQI, KDIGO, EAL[g])	X	X	X
	1.4B	Participates or leads organization/renal network quality initiatives related to nephrology nutrition		X	X
	1.4C	Monitors changes to local, state, renal network, and national quality initiatives and leads quality improvement activities to support nephrology nutrition and related services			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	Uses the organization/department performance improvement process to collect data and measure performance against desired outcomes	X	X	X

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Figure 2. Standards of Professional Performance for RDNs in Nephrology Nutrition. 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**
	1.5B		Obtains training and mentors members of the interdisciplinary[A] team on performance improvement model(s) and leads performance improvement initiatives		X	X
	1.5C		Develops and leads interdisciplinary quality improvement activities across the organization or system			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 interdisciplinary efforts to monitor and improve nephrology outcomes	X	X	X
	1.6B		**Defines expected outcomes**	**X**	**X**	**X**
		1.6B1	Identifies quality outcomes and defines targets for the population/organization/program through evaluation, benchmarking, and monitoring environmental trends		X	X
		1.6B2	Leads the development of clinical measures from which nephrology nutrition care-related outcomes can be derived, reported, and used for improvement			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 uses nationally standardized and consensus-based nephrology performance measures (eg, MAT,[h] CMS 5-Star,[i] QIP[j])	X	X	X
		1.6C2	Selects criteria for data collection and participates in the development of data collection tools (eg, clinical, operational, financial)		X	X
	1.6D		**Measures quality of services in terms of structure, process, and outcomes**	**X**	**X**	**X**
		1.6D1	Uses systematic quality improvement approaches to collect and trend data regarding the population served (eg, demographics, acuity, clinical risk factors, morbidity, and mortality), services provided, and outcomes	X	X	X
		1.6D2	Routinely assesses services using culturally competent engagement process in accordance with established performance criteria to improve practice and nephrology nutrition care		X	X
		1.6D3	Develops or uses systematic processes or tools to monitor and analyze nephrology nutrition-related aggregate data in comparison to expected outcomes			X
		1.6D4	Mentors practitioners in measuring nephrology processes to evaluate effectiveness			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	Ensures that screening for nutrition risk is a component of program admission process or nutrition assessment using evidence-based screening tools for the setting or population	X	X	X

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Figure 2. *(continued)* Standards of Professional Performance for RDNs in Nephrology Nutrition. 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**
		1.6E2	Collects data using clinical quality measures applicable to population and setting (eg, screening timeframes, severity of malnutrition, and services provided [eg, nutrition assessment, nutrition or dietary supplements, nutrition counseling])	X	X	X
	1.6F		**Documents outcomes and patient reported outcomes (eg, PROMIS[B])**	**X**	**X**	**X**
		1.6F1	Documents outcomes related to patient-/client-reported quality of life, depression, or other indicators (eg, KDQOL,[k] PHQ-2[l]) and participates in evaluation and reporting	X	X	X
		1.6F2	Collaborates with RDN colleagues in local/system nephrology programs to collect data for documenting and reporting outcomes of nutrition interventions		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**
		1.6G1	Actively promotes the inclusion of RDN-provided MNT and nephrology nutrition service components in local, regional, or national nephrology and transplant data registries		X	X
		1.6G2	Analyzes and uses information for long-range strategic planning (eg, program and service efficacy)			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		Evaluates and ensures safe nephrology nutrition care delivery; seeks assistance if needed	X	X	X
	1.7B		Keeps up-to-date on current findings regarding dietary supplements (eg, Natural Medicine Database [https://naturalmedicines.therapeuticresearch.com/], MedWatch, Nutrition.gov: Dietary Supplements), and food safety	X	X	X
	1.7C		Identifies and educates patients/clients/families and interdisciplinary team regarding potential drug-food/nutrient and drug-dietary supplement (eg, vitamin, mineral, herbal) interactions; consults with pharmacist as needed	X	X	X
	1.7D		Reports errors, hazards, or near misses; refers patients/clients to appropriate services when error or hazard is outside of practitioner's scope of practice or experience	X	X	X
	1.7E		Maintains awareness of problematic product names, drug classes, and error-prevention recommendations provided by ISMP,[m] FDA,[n] and USP[o]		X	X
	1.7F		Collaborates with the interdisciplinary team and other providers to recognize potential drug–drug and drug–nutrient interactions and potential interactions between prescribed treatments and integrative and functional medicine therapies		X	X
	1.7G		Contributes to developing/maintaining systems to identify, monitor, prevent, and report medical errors, sentinel events, and near misses (eg, medication, treatment, infection control)			X
1.8	**Compares actual performance to performance goals (eg, 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 or service performance**	**X**	**X**	**X**
	1.8B		Evaluates individual and organization performance in comparison with goals and expected outcomes; contributes to or develops action plans to address identified gaps		X	X

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Figure 2. *(continued)* Standards of Professional Performance for RDNs in Nephrology Nutrition. 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					
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Each RDN:			**Competent**	**Proficient**	**Expert**
	1.8C	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**
	1.9A	Conducts data analysis to evaluate the success of action plans in meeting patient/client and program goals, develops report of outcomes, and provides recommendations		X	X
	1.9B	Guides the development, evaluation, and redesign of organization/ program evaluation systems			X
1.10	**Improves or enhances patient/client/population care or services working with others based on measured outcomes and established goals using culturally competent engagement processes**		**X**	**X**	**X**
	1.10A	Systematically reviews nutrition care or services to identifying problem areas and recommends improvements to practice	X	X	X
	1.10B	Leads or collaborates in creating and evaluating systems, processes, and programs that support organization nephrology nutrition-related core values and evidence-based guidelines for safe, quality care		X	X
	1.10C	Develops or investigates systems, processes, and programs that support best practices in nephrology nutrition care and services; publishes outcomes and best practices			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 preestablished 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.

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 national organizations, 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**) (eg, Pediatric Nutrition, Diabetes Care, Post-Acute and Long-Term Care Nutrition)**	**X**	**X**	**X**
	2.2B	Uses the Standards for Nephrology Nutrition to assess performance at the appropriate level of practice and develop a professional development plan to advance skills/practice	X	X	X

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Figure 2. *(continued)* Standards of Professional Performance for RDNs in Nephrology Nutrition. 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						
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Each RDN:				**Competent**	**Proficient**	**Expert**
	2.2C	Reviews and recommends updates to organization policies, guidelines, or materials (eg, job descriptions, performance competencies, career ladders, acceptable performance level) reflecting the SOP and SOPP for RDNs in Nephrology Nutrition; seeks assistance and approvals, if needed			X	X
	2.2D	Uses advanced practice experience and knowledge to define specific activities for levels of practice (competent, proficient, expert) reflecting the SOP and SOPP for RDNs in Nephrology Nutrition				X
2.3	**Demonstrates and documents competence in practice and delivery of customer-centered service(s)**			**X**	**X**	**X**
	2.3A	Documents examples of expanded professional responsibility reflective of proficient practice (eg, evaluates the delivery of customer-centered services provided and recommends changes)			X	X
	2.3B	Documents examples of expanded professional responsibility reflective of expert practice (eg, evaluates and develops practice and delivery models for customer-centered services; quality assurance and performance improvement [QAPI] leadership responsibilities; corporate/system level role [s])				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	Exhibits professionalism and strives for improvement in practice (eg, manages change effectively, demonstrates assertiveness, listening and conflict resolution skills, and demonstrates ability to build coalitions)		X	X	X
	2.4C	Recognizes strengths and limitations of current information/ research/ evidence when making recommendations; seeks assistance if needed		X	X	X
	2.4D	Develops and implements nephrology nutrition-related policies and procedures that ensure staff accountability and responsibility; collaborates with interdisciplinary team or seeks guidance if needed			X	X
	2.4E	Leads by example; exemplifies professional integrity as a leader of nephrology nutrition by serving as a resource for evidence-based practice and educating members of the interdisciplinary team/organization				X
2.5	**Conducts self-evaluation at regular intervals**			**X**	**X**	**X**
	2.5A	**Identifies needs for professional development (eg, feedback from peers, interdisciplinary team members, patients/clients; comparison to SOP and SOPP indicators; published nephrology nutrition practice guidelines; or the Nephrology Nutrition Content Outline/Test Specifications provided with the Certified Specialist in Renal Nutrition [CSR] credentialing examination review materials)**		**X**	**X**	**X**
	2.5B	Compares individual performance with personal goals and for consistency with best practices in nephrology nutrition practice to identify areas for professional growth and development		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, organization policies and procedures, credentialing agency[ies])**		**X**	**X**	**X**
		2.6A1	Designs and implements a continuing education plan for advancing nephrology nutrition knowledge and skills (eg, serves on an editorial board or participates in scholarly review of professional or practice articles, books or chapters; establishes/leads a journal club for IDT or department; participates in grand rounds)		X	X

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Indicators for Standard 2: Competence and Accountability						
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Each RDN:				**Competent**	**Proficient**	**Expert**
		2.6A2	Designs and implements an expert-level plan for professional growth and development (eg, leads an editorial board, serves on a work group for development of evidence-based practice guidelines; serves as a subject matter expert in an organization initiative)			X
	2.6B		Seeks opportunities to participate in continuing education in local, regional, national, or international settings	X	X	X
2.7	**Engages in evidence-based practice and uses best practices**			**X**	**X**	**X**
	2.7A		Reads nephrology nutrition-related peer-reviewed publications and participates in continuing education	X	X	X
	2.7B		Uses knowledge and experience to implement and communicate best practices		X	X
	2.7C		Uses advanced training, research, and emerging theories to manage complex cases (eg, multiple comorbidities, complications) in the CKD[P] population			X
2.8	**Participates in peer review of others as applicable to role and responsibilities**			**X**	**X**	**X**
	2.8A		Engages in peer review activities consistent with setting and patient/client population (eg, peer evaluation, peer supervision, clinical chart review, and performance evaluations)		X	X
	2.8B		Designs or leads peer-review process(es) or activities			X
2.9	**Mentors or precepts others**			**X**	**X**	**X**
	2.9A		Participates in mentoring/precepting nutrition and dietetics students/interns; seeks assistance if needed	X	X	X
	2.9B		Pursues mentoring relationships and precepting opportunities with credentialed nutrition and dietetic practitioners and nutrition and dietetics students/interns from marginalized populations	X	X	X
	2.9C		Functions as a mentor or preceptor in nephrology nutrition for entry-level and competent-level RDNs and nutrition and dietetics students/interns		X	X
	2.9D		Develops or directs mentoring or practicum opportunities for RDNs to support achieving proficient-level practice or specialist certification in nephrology nutrition		X	X
	2.9E		Functions as a mentor or preceptor in nephrology nutrition for competent- and proficient-level RDNs or health care practitioners of other discipline			X
	2.9F		Provides nephrology nutrition 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			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**
	2.10A		Completes pertinent nephrology-related education and skill development opportunities; see Figure 4	X	X	X
	2.10B		Obtains and maintains specialist credentials(s) (eg, CSR, CDCES, CSP, CCTD, RDN-Advanced Practitioner Certification in Clinical Nutrition [RDN-AP])		X	X
	2.10C		Develops programs, tools, and resources to support RDNs in obtaining specialty certification in nephrology nutrition			X
	2.10D		Integrates nephrology practice with other focus areas of practice using national standards (eg, diabetes, nutrition support, pediatrics)			X

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Examples of Outcomes for Standard 2: Competence and Accountability

- Practice reflects:
  - Code(s) of ethics (eg, Academy/CDR, other national organizations, 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**
	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 strategic activities for nephrology nutrition programs (eg, program planning, staffing, marketing, budgeting, billing, if applicable)		X	X
		3.1A2	Develops and manages nutrition programs tailored to the needs of the organization and the patient/client population		X	X
		3.1A3	Designs, promotes, and seeks executive and/or medical staff commitment to new services that will meet organization goals and support desired nutrition outcomes			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	Conducts ongoing assessment of the nephrology and health care environments identifying opportunities to develop and deliver education, screening, and prevention services related to kidney disease	X	X	X
		3.1B2	Collaborates with local and regional programs that support and optimize provision of nephrology services (eg, health departments, volunteer organizations, networks)		X	X
		3.1B3	Leads in the evaluation, development or modification, and dissemination of appropriate products and services to meet patient/ client population needs			X
	3.1C	**Makes decisions and recommendations that reflect stewardship of time, talent, finances, and environment**		**X**	**X**	**X**
		3.1C1	Advocates for staffing and resources that support patient/client population, census/caseload, acuity, programs, services, and goals		X	X

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Indicators for Standard 3: Provision of Services						
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Each RDN:				**Competent**	**Proficient**	**Expert**
	3.1D	**Proposes programs and services that are customer-centered, culturally appropriate, and minimize disparities**		**X**	**X**	**X**
		3.1D1	Adapts practices to minimize or eliminate health disparities associated with culture, race, gender, socioeconomic status, age, health literacy, and other factors	X	X	X
		3.1D2	Develops programs and services that are tailored to patient/client population characteristics, disease states, health status, and social determinants of health		X	X
		3.1D3	Evaluates effectiveness of and revises programs and services for continuous improvement of outcomes			X
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	Participates in or develops processes to receive or make referrals to other providers that address the needs of the CKD population (eg, pharmacist, mental/behavioral health professional, physical therapist, speech language pathologist, vascular surgeon/center, transplant center, bariatric surgery center)		X	X
		3.2A2	Directs, manages, and evaluates referral processes			X
	3.2B	**Refers customers to appropriate providers when requested services or identified needs exceed the RDN's individual scope of practice**		**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	Collaborates with health care practitioners to facilitate referrals when patient/client need(s) is outside the RDN's scope of practice (eg, mental/behavioral health professional, exercise physiologist/physical therapist, podiatrist, dentist, pharmacist, ophthalmologist, bariatric/vascular access/transplant center)	X	X	X
		3.2B3	Establishes and maintains networks to support the overall care of the patients/clients with CKD		X	X
		3.2B4	Supports referral resources with curriculum and training regarding the complex needs of patients/clients with CKD			X
	3.2C	**Monitors effectiveness of referral systems and modifies as needed to achieve desirable outcomes**		**X**	**X**	**X**
		3.2C1	Tracks data to evaluate efficiency and effectiveness of the nutrition referral process		X	X
		3.2C2	Collaborates with the interdisciplinary team and other health care providers to review data and update the nutrition referral process and tools when needed		X	X
		3.2C3	Provides organization/program data needed to improve/update the nutrition-related information included in referrals			X

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Indicators for Standard 3: Provision of Services						
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Each RDN:				**Competent**	**Proficient**	**Expert**
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**
		3.3A1	Recognizes the influence that culture, health literacy, and socioeconomic status have on health/illness experiences and the patient/client population's use of and access to health care services	X	X	X
		3.3A2	Applies goal setting and behavior change strategies and techniques (eg, stages of change/transtheoretical model, motivational interviewing) in gathering information to reflect in design of person-centered services	X	X	X
		3.3A3	Conducts needs assessment considering social determinants of health in collaboration with interdisciplinary team and community stakeholders to identify patient/client population's needs and services that are available		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	Adapts program/service practices to meet the needs of an ethnically and culturally diverse nephrology population	X	X	X
		3.3B2	Participates in or plans, develops, and implements systems of care and services reflecting needs of the population (health conditions, ethnic/cultural characteristics)		X	X
		3.3B3	Leads in applying, evaluating, and communicating the effectiveness of different theoretical frameworks for interventions (eg, health belief model, social cognitive theory/social learning theory, stages of change/ transtheoretical model) in nephrology nutrition			X
	3.3C	**Communicates principles of disease prevention and behavioral change appropriate to the customer or target population**		**X**	**X**	**X**
		3.3C1	Identifies patient/client population's cultural or health-related beliefs regarding CKD that influence delivery of nephrology nutrition education and care	X	X	X
		3.3C2	Advises on and uses systems or tools for communicating disease prevention and behavioral change principles with specific populations		X	X
		3.3C3	Designs systems or tools to communicate disease prevention and behavioral change with specific populations			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**
		3.3D1	Collaborates with patients/clients/caregivers, health care providers, and other support resources to create person-centered action plans that reflect the patients'/clients' needs, wishes, desired outcomes, and program/service goals	X	X	X
	3.3E	**Involves customers in decision making**		**X**	**X**	**X**
		3.3E1	Uses appropriate tools such as motivational interviewing to involve patients/clients advocates in directing nephrology nutrition care	X	X	X
		3.3E2	Facilitates patients'/clients'/advocates' participation in health care decision making and goal setting	X	X	X

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Each RDN:					**Competent**	**Proficient**	**Expert**
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 interdisciplinary teams**			**X**	**X**	**X**
		3.4A1	Works with interdisciplinary team for education/skill development and to demonstrate role of RDN and nutrition in care of individuals with CKD		X	X	X
		3.4A2	Collaborates with interdisciplinary team and other health care practitioners to: • plan and deliver appropriate products and services (eg, medical foods/nutrition supplements, referrals to specialists, use of community resources) • provide education or community programs		X	X	X
		3.4A3	Serves in a consultant role for nutrition management of CKD and comorbidities			X	X
		3.4A4	Facilitates interdisciplinary discussions and care planning for patients/clients with complex nutrition needs to achieve nutrition outcomes (eg, acute transplant rejection, hepatorenal syndrome, cardiorenal syndrome, post-bariatric surgery)			X	X
		3.4A5	Plans, develops, and facilitates interdisciplinary process for implementation of systems/programs for nephrology nutrition care and services				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 nephrology nutrition care based on evidence-based guidelines and recommendations in the design of programs and services; seeks assistance if needed		X	X	X
		3.4B2	Identifies and uses population-specific nutrition and nephrology screening guidelines and tools		X	X	X
		3.4B3	Manages delivery of nephrology nutrition care and services as an active participant in interdisciplinary teams		X	X	X
		3.4B4	Implements and manages community-based CKD nutrition education/prevention programs, using evidence-based strategies and available resources			X	X
			3.4B4i	Plans and develops population-based CKD nutrition and health promotion/prevention programs, using evidence-based strategies and available resources			X
		3.4B5	Guides the development, implementation, and evaluation of nephrology nutrition care, programs, screening initiatives, and services for individuals with or at risk for CKD				X

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Indicators for Standard 3: Provision of Services							
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Each RDN:					**Competent**	**Proficient**	**Expert**
	3.4C	**Uses and develops or contributes to selection, design and maintenance of policies, procedures (eg, discharge planning/transitions of care, emergency planning), 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	Participates in the development and revision of policies, procedures, and evidence-based practice tools for nephrology nutrition-related services applicable to population served by setting(s)		X	X	X
		3.4C2	Develops or maintains nephrology nutrition protocols, policies and procedures based on research, national and international evidence-based guidelines, and best practices			X	X
		3.4C3	Leads interdisciplinary process of monitoring, evaluating, improving, and implementing protocols, guidelines, and practice tools				X
		3.4C4	Participates in or leads in the development of provider-, facility-, or organization-approved clinical protocols guiding delivery of care (eg, medical food/nutritional supplements, dietary supplements, CKD-MBD management, or dialysis adequacy)				X
	3.4D	**Uses and participates in or develops processes for order writing and other nutrition-related privileges, in collaboration with the medical staff[C] 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[D]-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 provider- or organization-approved protocols or privileges for ordering therapeutic diets and nutrition-related services (eg, oral nutrition supplements; vitamins/minerals; to initiate/titrate medication for management of phosphorus, or chronic kidney disease-metabolic bone disease [CKD-MBD]); seeks assistance if needed	X	X	X
			3.4D1ii	Contributes to organization/medical staff process for identifying RDN privileges or delegated orders to support nephrology nutrition care and services (eg, ordering or revising diet, medical food/nutritional supplements, enteral or parenteral nutrition, vitamin and mineral supplements, or other nutrition-related orders)		X	X
			3.4D1iii	Advocates, negotiates, or establishes nutrition privileges at a systems level for new advances in practice			X

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Indicators for Standard 3: Provision of Services						
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Each RDN:				**Competent**	**Proficient**	**Expert**
		3.4D2	**Uses and participates in, collaborates with, 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**
		3.4E1	Develops tools to monitor adherence to billing regulations and ethical billing practices		X	X
	3.4F		**Communicates with the interprofessional team and referring party consistent with the HIPAA rules for use and disclosure of customer's personal health information (PHI)**	**X**	**X**	**X**
		3.4F1	Follows regulations and organization/program policies for accessing, transporting, and storing information containing PHI when working in multiple sites; seeks assistance if needed	X	X	X
		3.4F2	Develops processes and tools to monitor adherence to HIPAA rules or address breaches in the protection of PHI and use of electronic medical records (onsite or through remote access)		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	Determines capabilities/expertise of professional, technical, and support staff working with patients/clients with CKD to appropriately delegate tasks		X	X
	3.5B		**Supervises professional, technical, and support personnel**	**X**	**X**	**X**
		3.5B1	Trains professional, technical, and support personnel and evaluates and documents their competence/skills		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) and ecological sustainability, and to meet the culture and related needs and preferences of target populations (eg, 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**
		3.6A1	Collects data and provides feedback on food delivery systems serving individuals with CKD in health care and community settings (eg, hospital, long-term care facility, outpatient ambulatory care facilities, senior center, food banks/pantries, home delivery, school or childcare sites)	X	X	X
		3.6A2	Evaluates effectiveness of foodservice planning and delivery for patients/clients with CKD to identify areas for improvement applicable to setting and role		X	X

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Each RDN:				**Competent**	**Proficient**	**Expert**
		3.6A3	Consults on design, evaluation, or modification of food delivery systems in health care and community settings (eg, meal programs, food banks/pantries serving food insecure) to identity and support the needs of the CKD population			X
	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	Participates in development or provides consultation on menu systems to meet needs of individuals with CKD across the life cycle		X	X
		3.6B2	Develops nephrology nutrition-related menu/snack guidelines reflecting national standards/guidelines (eg, National Kidney Diet, KDOQI, EAL, NCM[q]) and applicable federal or state regulations to guide foodservice program(s) for populations served			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	Provides guidance regarding medical foods/nutritional supplements, enteral or parenteral nutrition formulas including IDPN[r] and IPN[s] in accordance with best practice for the spectrum of CKD (eg, Academy, ASPEN,[t] NKF[u])		X	X
		3.6C2	Designs or consults on organization policies, procedures, protocols, or programs to provide guidance for nutrition support best practices for individuals with CKD			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	Promotes use of standardized terminology and documentation format	X	X	X
		3.7A2	Uses and participates in the development/revision of electronic health records applicable to setting and strategies for manual documentation as a backup	X	X	X
	3.7B	**Implements data management systems to support interoperable data collection, maintenance, and utilization**		**X**	**X**	**X**
		3.7B1	Develops or collaborates with the interdisciplinary team to capture nephrology-specific data through electronic health records or other data-collection tools		X	X
		3.7B2	Develops policies for data collection and analysis process			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	Analyzes and uses data to communicate value of nutrition services in relation to patients/clients 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**
		3.7D1	Prepares and presents nutrition care service and outcomes data for organization and accreditation organization if applicable; seeks assistance if needed		X	X

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Figure 2. *(continued)* Standards of Professional Performance for RDNs in Nephrology Nutrition. 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**
3.8	**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 organization policies related to participating in advocacy activities	X	X	X
		3.8A2	Advocates with state and federal legislative representatives regarding the benefit of MNT/CKD management and prevention services on health care costs (eg, responds to Academy Action Alerts and other calls to action)	X	X	X
		3.8A3	Contributes to or initiates advocacy activities/issues at the local, state or federal level; recruits/coordinates others in advocacy activities		X	X
		3.8A4	Advocates for the advancement of nephrology-related nutrition practice to external stakeholders (eg, CMS, state licensure boards, ESRD[v] Networks, and the Academy's Policy Initiatives and Advocacy 0ffice)		X	X
		3.8A5	Interacts and serves as a resource with legislators, payers, and policy makers to influence CKD care and nephrology nutrition services (eg, providing testimony at legislative and regulatory hearings and meetings)		X	X
		3.8A6	Provides leadership to colleagues (RDNs, community members, other stakeholders) on nutrition and public policy			X
		3.8A7	Contributes to development/review/comments/ recommendations on policy, statutes, administrative rules 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	Participates in CKD population advocacy activities (eg, community screenings; local NKF, AKF,[w] or association events; CKD outreach education programs)	X	X	X
		3.8B2	Identifies needs and opportunities for CKD population advocacy and participates in efforts to address issue(s)		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, Member Interest Groups, and State Affiliates)**		**X**	**X**	**X**
		3.8C1	Participates in regional or national activities related to nephrology or nutrition policy and services; seeks opportunities for collaboration		X	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 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, 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, 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**
	4.1A	**Understands basic research design and methodology**	**X**	**X**	**X**
	4.1B	Reads primary peer-reviewed publications pertaining to nephrology and nutrition; evaluates research design, methodology, and outcomes to determine reliability and practice applications	X	X	X
	4.1C	Uses and promotes the use of evidence-based tools/resources (eg, EAL, practice guidelines) to guide clinical practice	X	X	X
	4.1D	Uses experience and critical thinking to evaluate strength of original research and evidence-based guideline relevant to nephrology nutrition, including limitations and potential bias(es)		X	X
	4.1E	Evaluates and applies nephrology-related public health trends and epidemiological data related to CKD prevention, treatment, and underlying causes (eg, USRDS,[x] HP 2020, DOPPS,[y] SRTR[z])		X	X
	4.1F	Identifies nephrology nutrition questions and uses a systematic approach for applying research and evidence-based guidelines (eg, EAL, KDQOI, KDIGO)			X
4.2	**Uses best available research/evidence and information as the foundation for evidence-based practice**		**X**	**X**	**X**
	4.2A	Systematically reviews and applies the best available research where evidence-based practice guidelines for nephrology are not established		X	X
	4.2B	Integrates research findings and evidence into peer-reviewed publications and recommendations for practice			X
	4.2C	Mentors others in applying evidence-based research and guidelines for practice			X
4.3	**Integrates best available research/evidence and information with best practices, clinical and managerial expertise, and customer values**		**X**	**X**	**X**
	4.3A	Applies evidence-based practice guidelines (eg, EAL, KDOQI, KDIGO) to provide safe, effective, and quality person-centered nutrition care for the CKD patient/client population	X	X	X
	4.3B	Manages the integration of evidence-based guidelines into policies, procedures, and protocols to guide nephrology nutrition practice		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 bridge research to practice through journal clubs, interdisciplinary discussions, and practice-based research networks (eg, Academy's NRN,[aa] EAL, RPG,[bb] NKF-CRN,[cc] local renal networks)	X	X	X
	4.4B	Participates in practice-based research networks (eg, Academy NRN or EAL workgroup) and the development or implementation of practice-based research		X	X
	4.4C	Functions as a co-author or co-investigator of research and position or practice papers		X	X
	4.4D	Serves as primary or senior investigator, advisor, or preceptor on research teams that examine relationships between nutrition and kidney disease			X

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Figure 2. *(continued)* Standards of Professional Performance for RDNs in Nephrology Nutrition. 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**
4.5	**Promotes application of research in practice through alliances or collaboration with food and nutrition and other professionals and organizations**			**X**	**X**	**X**
	4.5A	Identifies research questions and participates in studies related to nephrology nutrition care and services		X	X	X
	4.5B	Collaborates with interdisciplinary or interorganization teams to perform and disseminate nephrology nutrition research			X	X
	4.5C	Leads interdisciplinary or interorganization collaborative research activities and integration of research data into publications and presentations related to nephrology nutrition				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 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**
		5.1A1	Demonstrates ability to review and apply evidence-based guidelines when communicating and disseminating information			X	X
		5.1A2	Demonstrates ability to convey clinically complex concepts to other health care practitioners, patients/clients, and the public				X
	5.1B	Identifies and reviews relevant nephrology-related nutrition and education publications, resources, and public health trends (eg, prevalence, prevention, and treatment) and applies to practice			X	X	X
	5.1C	Interprets regulatory, accreditation, and reimbursement programs and standards for organizations and providers that are specific to nephrology care and education (eg, CMS, accreditation organization, Medicare MNT coverage guidelines); seeks assistance if needed			X	X	X
	5.1D	Contributes to and advocates for the advancement of the body of knowledge for the profession (eg, research, presentations, publications, patient/client education)				X	X
	5.1E	Serves as an expert resource/opinion leader for colleagues, other health care practitioners, the community, and outside agencies related to nephrology nutrition					X

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Figure 2. *(continued)* Standards of Professional Performance for RDNs in Nephrology Nutrition. 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**
5.2	**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**
	5.2A	**Uses communication methods (ie, oral, print, one-on-one, group, visual, electronic, and social media) targeted to various audiences**		**X**	**X**	**X**
		5.2A1	Determines the most appropriate information and best educational method to present/disseminate information based on level of understanding of the individual or target audience (eg, family, care providers, professional colleagues, administrators, or the community)	X	X	X
	5.2B	**Uses information technology to communicate, disseminate, manage knowledge, and support decision making**		**X**	**X**	**X**
		5.2B1	Identifies and uses web-based/electronic nephrology tools/resources (eg, lifestyle apps) and electronic health records, and telehealth platforms within worksite as appropriate	X	X	X
		5.2B2	Develops and updates web-based/electronic nephrology nutrition tools/resources (eg, lifestyle apps, blogs)		X	X
		5.2B3	Seeks opportunities to contribute expertise to large-scale bioinformatics/medical informatics projects as applicable			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	Integrates and applies current and emerging scientific knowledge of nephrology nutrition, when considering an individual's health status, behavior barriers, communication skills, and interdisciplinary team involvement; seeks collaborative guidance if needed			X	X
	5.3B	Leads the integration of current and emerging knowledge from clinical research findings and consultation, in the management and resolution of complex problems in nephrology				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 the educational and professional development of credentialed nutrition and dietetics practitioners, interns, students, and other health care practitioners through formal and informal teaching, preceptorship, and mentorship		X	X
		5.4A2	Builds and maintains collaboration between researchers, educators, and decision makers to facilitate effective knowledge transfer for health practitioners' education programs			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	Recommends current, evidence-based CKD and nephrology nutrition educational resources	X	X	X
		5.4B2	Connects patients/clients/advocates and support networks with programs/services within the patients'/clients' ethnic/cultural community to positively influence health-related decision making and outcomes	X	X	X
		5.4B3	Contributes to development of patient/client education materials/ classes	X	X	X

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Figure 2. *(continued)* Standards of Professional Performance for RDNs in Nephrology Nutrition. 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**
		5.4B4	Leads individuals and groups in efforts to identify and secure appropriate and available resources and services (eg, senior meal programs, credible websites)		X	X
		5.4B5	Develops, manages, and refines processes to identify, track, and monitor patient/client population's use of specific ethnic/culture community resources, and collaborates as appropriate			X
	5.4C		**Uses professional writing and verbal skills in all types of communications**	**X**	**X**	**X**
	5.4D		**Reflects knowledge of population characteristics in communication methods (eg, literacy and numeracy levels, need for translation of written materials or a translator, communication skills, and learning, hearing or vision disabilities)**	**X**	**X**	**X**
5.5	**Establishes credibility and contributes as a food and nutrition resource within the interdisciplinary health care and management team, organization, and community**			**X**	**X**	**X**
	5.5A		Contributes formally and informally to the interdisciplinary team (eg, shares relevant articles, investigates queries, serves as nutrition subject matter expert)	X	X	X
	5.5B		Communicates with members of the interdisciplinary team and other providers to promote the use of evidence-based guidelines/practices and the EAL to integrate nutrition care in the management of CKD	X	X	X
	5.5C		Participates in interdisciplinary collaboration(s) promoting the use of evidence-based guidelines/practices that integrate nutrition care and RDNs in CKD management to local, state, regional, and national professional organizations		X	X
	5.5D		Promotes the specialized knowledge and skills of the nephrology RDN with the CSR or other credentials to the interdisciplinary team		X	X
	5.5E		Leads interdisciplinary collaborations at an organization level			X
5.6	**Communicates performance improvement and research results through publications and presentations**			**X**	**X**	**X**
	5.6A		Presents nephrology nutrition guidelines and research at the local level (eg, community groups, interdisciplinary team, colleagues)	X	X	X
	5.6B		Serves in a leadership role for local and national organizations, publications (ie, editor or editorial advisory board), program planning committees, or within business/industry-related programs/advisory boards		X	X
	5.6C		Presents evidence-based nephrology nutrition research, guidelines, and information at professional meetings and conferences (eg, local, regional, national, or international)		X	X
	5.6D		Directs collation of research data into publications (eg, systematic reviews, position or practice papers, review articles) 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 nonprofit organizations serving the food insecure) providing food and nutrition expertise**			**X**	**X**	**X**
	5.7A		Serves as a nephrology nutrition resource as an active member of local or state organizations, coalitions, or advisory boards	X	X	X
	5.7B		Pursues leadership development opportunities as a subject matter expert on local, regional, and national nephrology-related organizations, coalitions, or advisory boards		X	X

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Figure 2. *(continued)* Standards of Professional Performance for RDNs in Nephrology Nutrition. 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**
	5.7C	Contributes nutrition-related expertise as a collaborator in national projects and professional organizations (eg, NKF, RPG, KDOQI, KDIGO, AKF, AAKP,[dd] ANNA,[ee] NQF, CMS Technical Expert Panel)			X
	5.7D	Identifies new opportunities for leadership and cross-discipline dialogue to promote nutrition and dietetics practice in a broader context			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
- 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, and 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 nephrology nutrition programs and services (eg, staffing, marketing, budgeting, information management system/ tools, billing when applicable)	X	X	X
	6.1B	Recognizes and uses resources (eg, education materials, training tools, staff time) effectively in the provision of nephrology nutrition services to achieve desired outcomes	X	X	X
	6.1C	Manages effective delivery of nephrology programs and services (eg, budget, staffing, billing processes when applicable, program administration, education programs, materials development, and supplies)		X	X
	6.1D	Directs or manages design and delivery of nephrology nutrition services			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, demographic characteristics, staffing benchmarking, and payment/revenue)		X	X
	6.2D	Evaluates the provision of nephrology nutrition care and services, including staffing levels (staff to patient ratio), payment/revenue data, and customer satisfaction/experience data			X

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Figure 2. *(continued)* Standards of Professional Performance for RDNs in Nephrology Nutrition. 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	Demonstrates understanding of and adheres to regulatory and accreditation standards relevant to CKD and nephrology nutrition (eg, CMS Conditions for Coverage/Conditions of Participation, CMS MNT coverage guidelines, accreditation organization standards)	X	X	X
	6.3B	Participates in evaluation, selection, and implementation of new products and services to ensure safe, optimal, and cost-effective delivery of nephrology nutrition care and services	X	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	Participates actively in QAPI, including collecting, documenting, and analyzing data relevant to resource use (eg, fiscal, personnel, services, materials, supplies) and recommends modifications	X	X	X
	6.4B	Uses data to modify resource management or delivery of services (eg, staffing, triage, nutrition supplements, education materials/tools) as necessary to achieve desired outcomes		X	X
	6.4C	Leads interdisciplinary team in QAPI or in applying best practices to manage resources		X	X
	6.4D	Integrates quality measures and performance improvement processes into management of human and financial resources and information technology			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 or conducting regular surveys with patients/clients/advocates, interdisciplinary team members, community participants, and stakeholders to assess satisfaction; seeks assistance if needed	X	X	X
	6.5B	Analyzes data related to program services and patient/client and stakeholder satisfaction; communicates results and recommendations for change(s)		X	X
	6.5C	Resolves internal and external problems that may affect the delivery of nephrology nutrition services		X	X
	6.5D	Implements, monitors, and evaluates changes in nephrology nutrition care and service delivery 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
- Desired outcomes are achieved, documented, and disseminated
- Key performance indicators are identified and tracked in alignment with organization mission, vision, principles, and values

[A]**Interdisciplinary**: The term *interdisciplinary* is used in this evaluation resource as a universal term. It includes a diverse group of team members (eg, physicians, nurses, dietitian nutritionists, physician assistants, nurse practitioners, pharmacists, psychologists, social workers, dialysis technicians, medical assistants, and occupational and physical therapists), depending on the needs of the patient/client/customer. Interdisciplinary could also mean interprofessional or multidisciplinary.

[B]**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.

[C]**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 nonphysician practitioners who are determined to be eligible for appointment by the governing body.[7]

[D]**Nonphysician practitioner**: A *nonphysician 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, 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.[7,8] 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.[10,11]

Acronyms

[a]MNT = medical nutrition therapy.
[b]NIH = National Institutes of Health.
[c]KDIGO = Kidney Disease: Improving Global Outcomes.
[d]KDOQI = Kidney Disease Outcome Quality Initiative.
[e]HP2020 = Healthy People 2020.
[f]CMS = Centers for Medicare and Medicaid Services.
[g]EAL = Academy of Nutrition and Dietetics Evidence Analysis Library.
[h]MAT = measurement assessment tool.
[i]5-Star = CMS Five-Star Quality Rating System.
[j]QIP = quality incentive program.
[k]KDQOL = Kidney Disease Quality of Life Survey.
[l]PHQ-2 = Patient Health Questionnaire-2 for mental health screening.
[m]ISMP = Institute for Safe Medication Practices.
[n]FDA = Food and Drug Administration.
[o]USP = US Pharmacopeial Convention.
[p]CKD = chronic kidney disease.
[q]NCM = Academy of Nutrition and Dietetics Nutrition Care Manuals (adult and pediatric).
[r]IDPN = intradialytic parenteral nutrition.
[s]IPN = intraperitoneal nutrition.
[t]ASPEN = American Society for Parenteral and Enteral Nutrition.
[u]NKF = National Kidney Foundation.
[v]ESRD = End Stage Renal Disease (increasingly being replaced by End Stage Kidney Disease [ESKD]).
[w]AKF = American Kidney Fund.
[x]USRDS = US Renal Data System.
[y]DOPPS = Dialysis Outcomes and Practice Patterns Study.
[z]SRTR = Scientific Registry of Transplant Recipients.
[aa]NRN = Academy of Nutrition and Dietetics Nutrition Research Network.
[bb]RPG = Academy of Nutrition and Dietetics Renal Dietitians Practice Group.
[cc]NKF-CRN = National Kidney Foundation Council on Renal Nutrition.
[dd]AAKP = American Association of Kidney Patients.
[ee]ANNA = American Nephrology Nurses Association.

Figure 2. *(continued)* Standards of Professional Performance for RDNs in Nephrology Nutrition. 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.