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American Dietetic Association and the National Kidney Foundation Standards of Practice and Standards of Professional Performance for Registered Dietitians (Generalist, Specialty, and Advanced) in Nephrology Care

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Editor's note: Figures 1-3 that accompany this article are available online at www.adajournal.org.

The American Dietetic Association (ADA) Renal Dietitians Practice Group (RPG) and the National Kidney Foundation Council on Renal Nutrition (NKF CRN), under the guid-

Approved May 2009 by the Quality Management Committee of the American Dietetic Association House of Delegates and the Executive Committee of the Renal Dietitians Dietetic Practice Group (RPG) of the American Dietetic Association. Scheduled review date: Sept 2014. Questions regarding the Standards of Practice and Standards of Professional Performance for RDs in Nephrology Care may be addressed to ADA Quality Management Staff at quality@eatright.org; Sharon McCauley, MS, MBA, RD, LDN, FADA, Director of Quality Management or Cecily Byrne, MS, RD, LDN, Manager of Quality Management.

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ance of the ADA Quality Management Committee and Scope of Dietetics Practice Framework Sub-Committee, have developed the Standards of Practice (SOP) and Standards of Professional Performance (SOPP) for Registered Dietitians (Generalist, Specialty, and Advanced) in Nephrology Care (see the Web site exclusive **Figures 1, 2 and 3** which are available only online at www.adajournal.org). The SOP and SOPP documents are based upon the 2008 Revised Standards of Practice in Nutrition Care and Standards of Professional Performance for Registered Dietitians (RDs) (1), which are part of ADA's Scope of Dietetics Practice Framework (2). The 2008 Revised SOP in Nutrition Care and SOPP, along with the Code of Ethics (3), guide the practice and performance of RDs in all settings.

These core standards and indicators (1) reflect the minimum competencies required for dietetics practice and professional performance for RDs. The

Specialty RD ^a	Advanced Practice RD
<p>A specialty level dietetics professional is an RD who has acquired the proficient specialized knowledge base, complex decision-making skills, and clinical competencies for specialty level practice, the characteristics of which are shaped by the context in which an RD practices.</p> <p>Specialty RDs practice from both <i>expanded</i> and <i>specialized</i> knowledge, skills, competencies, and experience.</p> <p><i>Specialization</i> is concentrating or delimiting one's focus to part of the whole field of dietetics (eg, ambulatory care, long-term care, diabetes, renal, pediatric, private practice, community, nutrition support, research, sports dietetics).</p> <p><i>Expansion</i> refers to the acquisition of new practice knowledge and skills, including the knowledge and skills that legitimize role autonomy within areas of practice that may overlap traditional boundaries of dietetics practice.</p> <p>Specialty level RDs are either certified or approved to practice in their expanded, specialized roles.</p> <p>Specialization does not always include an additional certification beyond RD certification.</p> <p>Specialty certification may or may not require evidence at Master's level.</p> <p>CDR^b offers five specialty certifications:</p> <ul style="list-style-type: none"> ● Board Certified Specialist in Pediatric Nutrition (CSP) ● Board Certified Specialist in Renal Nutrition (CSR) ● Board Certified Specialist in Sports Dietetics (CSSD) ● Board Certified Specialist in Gerontological Nutrition (CSG) ● Board Certified Specialist in Oncology Nutrition (CSO) <p>Examples of other specialty certifications available to the RD</p> <ul style="list-style-type: none"> ● Certified Diabetes Educator (CDE) ● Certified Nutrition Support Clinician (CNSC) <p>Educational Preparation (one or more of the following characteristics)</p> <ul style="list-style-type: none"> ● Educational preparation at the specialty level ● May include a formal educational program preparing for specialty practice ● Dietetics practice roles accredited or approved ● May include a formal system of certification and credentialing <p>Nature of Practice</p> <ul style="list-style-type: none"> ● Integrates research, education, practice and management ● Moderate degree of professional autonomy and independent practice ● Specialized assessment skills, decision-making skills, and diagnostic reasoning skills ● For nonclinical specialty practice (business and communications for example) may not include all characteristics; however, the complexity of the nature of practice will be comparable. <p>Experience</p> <p>Either require or recommend experience beyond entry level. Experience is required for specialty certification.</p>	<p>An advanced practice level dietetics professional is an RD who has acquired the expert knowledge base, complex decision-making skills, and clinical competencies for expanded practice, the characteristics of which are shaped by the context in which an RD practices.</p> <p>Advanced practice RDs practice from both <i>expanded</i> and <i>specialized</i> knowledge, skills, competencies, and experience.</p> <p><i>Expansion</i> refers to the acquisition of new practice knowledge and skills, including the knowledge and skills that legitimize role autonomy within areas of practice that may overlap traditional boundaries of dietetics practice.</p> <p>Advanced level practice is characterized by the integration of a broad range of unique theoretical, research-based, and practical knowledge that occurs as a part of training and experience beyond entry level. Advanced practice RDs are either certified or approved to practice in their expanded, specialized roles.</p> <p>Advanced practice does not always include an additional certification beyond RD certification. Certification may be one way of demonstrating advanced practice competency.</p> <p>Advanced Practice Certification typically implies a Master's degree level.</p> <p>Advanced Practice implies that the individual has the specialization and expanded knowledge, skills, competencies, and experience of Advanced Practice.</p> <p>Specialty Certification is not a prerequisite for Advanced Practice Certification.</p> <p>CDR does not currently offer any Advanced level certifications. Example of an advanced level certification available to the RD:</p> <ul style="list-style-type: none"> ● Board Certified in Advanced Diabetes Management (BC-ADM) <p>Educational Preparation (one or more of the following characteristics):</p> <ul style="list-style-type: none"> ● Educational preparation at the advanced level ● May include a formal educational program preparing for advanced practice ● Dietetics practice roles accredited or approved ● May include a formal system of certification and credentialing <p>Nature of Practice</p> <ul style="list-style-type: none"> ● Integrates research, education, practice, and management ● High degree of professional autonomy and independent practice ● Case management/own case load ● Advanced health assessment skills, decision-making skills, and diagnostic reasoning skills ● Nonclinical advanced practice (eg, business, communications) may not include all characteristics; however, the complexity of the nature of practice will be comparable ● Recognized advanced clinical competencies ● Provision of consultant services to health providers ● Plans, implements, and evaluates programs <p>Experience</p> <p>Documented hours of experience beyond entry level. Experience is required for advanced practice certification.</p>

Figure 4. American Dietetic Association (ADA) definitions from the ADA Scope of Dietetics Practice Framework. ^aRD=Registered Dietitian. ^bCDR=Commission on Dietetic Registration.

ADA's SOP in Nutrition Care and SOPP (1) serve as the blueprints for the development of practice-specific SOP and SOPP for RDs in generalist, specialty, and advanced levels of practice.

The SOP and SOPP for RDs in Nephrology Care were developed with input and consensus of content experts representing diverse practice and varying geographic perspectives.

In addition, the results of the Practice Analysis of Board Certified Specialists in Renal Nutrition (CSR) were used as reference (4). These SOP and SOPP serve as guides for self-evaluation and

professional development. They are used by RDs to assess their current level of practice in relation to meeting the standards and to determine the training required for advancement to a higher level of practice. They also serve as tools to demonstrate competence in delivering appropriately defined nephrology nutrition services for adult and pediatric clients. The term “client” noted in these standards refers to patients with kidney disease and their significant other/caregiver.

Three levels of practice in nephrology care are defined: generalist, specialty, and advanced. A **generalist or general practitioner** (5) is an individual whose practice includes responsibilities across several areas of practice including, but not limited to, more than one of the following: community, clinical, consultation and business, research, education, and food and nutrition management. An entry-level practitioner as defined by the Commission on Dietetic Registration (CDR) (5) has less than 3 years of practice experience as an RD and demonstrates a competent level of basic dietetics practice and professional performance. The entry-level practitioner also falls into the generalist level of practice. A **specialty practitioner** (5) is an individual who concentrates on one aspect of the profession of dietetics. This specialty may or may not have a credential and/or additional certification, but it often has expanded roles beyond entry-level practice. An **advanced practitioner** (5) has acquired the expert knowledge base, complex decision-making skills, and competencies for expanded practice, the characteristics of which are shaped by the context in which he or she practices. Advanced practitioners may have expanded roles, specialty roles, or both. Advanced practice may or may not include additional certification. Advanced practice is typically more complex, and the practitioner has a higher degree of professional autonomy and responsibility such as mentoring others, publishing, and developing standards or best practice recommendations (see Figure 4). In addition, it is recognized that nephrology care is most effectively undertaken with a multidisciplinary focus and at a level beyond that practiced by an entry-level RD.

These standards, along with ADA’s Code of Ethics (3), answer the questions: “Why is an RD uniquely qualified to provide nephrology nutrition ser-

vices?” and “What knowledge, skills and competencies must RDs demonstrate to provide safe, effective, and quality nutrition care in the nephrology setting at the generalist, specialty, and advanced levels?”

OVERVIEW

The prevalence of chronic kidney disease (CKD) has increased by 30% in the United States over the past decade (6). A 2007 study from the National Center for Health Statistics estimated that nearly 26 million Americans currently have CKD (6). An estimated 650,000 individuals may require treatment for CKD by 2010, a 60% increase in the number of patients compared to 2001 (7-9). From 1991 to 2000, the incidence of patients requiring renal replacement therapy (dialysis or kidney transplant) increased by 57% and the prevalence grew by 97%. Although the incidence and prevalence of CKD are high in the United States, awareness of the disease is lacking (10). More than 75% of all new diagnoses result from kidney damage caused by other chronic conditions, such as hypertension and diabetes, which are treated by primary care physicians and/or endocrinologists. While increasing evidence indicates that negative outcomes can be delayed or prevented by early diagnosis and treatment, CKD remains under-diagnosed and undertreated (11). Early referral to a nephrologist and an RD is paramount in delaying kidney disease progression and managing related co-morbidities. There are many hurdles in early referral and intervention, which are beyond the scope of this article.

In 2002, in an effort to increase awareness and identification of CKD, the National Kidney Foundation’s Kidney Disease Outcomes Quality Initiative (KDOQI) released a staging classification (stages 1-5) for CKD (12). These guidelines define CKD as either kidney damage (eg, pathologic abnormalities or laboratory/imaging study markers of damage) regardless of glomerular filtration rate (GFR) or a GFR of ≤ 60 mL/min/1.73 m² that is documented for 3 or more months.

The mortality rate for patients with CKD progresses with each stage. An analysis of outcomes of 27,998 CKD patients, collected as part of the third National Health and Nutrition Examination Survey (NHANES III) (1988 to

1994), showed that 5-year mortality rates were 19.5% for stage 2 patients, 24.3% for stage 3 patients, and 45.7% for stage 4 patients (7). According to the US Renal Data System, the mortality rate for dialysis patients is 307 deaths per 1,000 patient years among patients 65 and older (11). The first year on dialysis has the highest mortality rate and has not significantly improved over the last 9 years (11). The major health threat to the patient with CKD is increased risk of mortality due to cardiovascular (CV) complications. This increase in risk begins in the earliest stages of CKD (13).

Caring for patients with CKD necessitates specialized knowledge and skills to effectively meet the challenges associated with this growing epidemic. RDs practicing in Nephrology Care are an integral part of the interdisciplinary team that provides nephrology care. RDs provide nutrition and clinical expertise that contributes to optimal patient outcomes. In the Centers for Medicare and Medicaid Services (CMS) final rule of the Conditions for Coverage (CfC), the qualifications of the RD were designated as a “minimum of one year’s professional work experience in clinical nutrition as a registered dietitian” (14). This rule affirms that clinical dietetics experience is required for RDs practicing in nephrology.

RDs work in a variety of settings to manage the Nutrition Care Process for nephrology patients including, but not limited to, dialysis centers, transplant centers, hospitals, long-term care facilities, CKD clinics, diabetes clinics, ambulatory care facilities, and private practice. Managing the nutritional needs of patients as they progress through the stages of CKD involves comprehensive and ongoing medical nutrition therapy (MNT) to address nutrition issues such as protein energy malnutrition (PEM), protein energy wasting (PEW), electrolyte imbalances, anemia, vitamin deficiencies, fluid imbalance, and mineral and bone disorders. The MNT protocol for CKD is indicated for adults with a GFR ≤ 60 mL/min (CKD stages 3, 4, and 5), even when clinical disease signs are not obvious (15).

In addition to nutrition assessment and counseling, RDs working with patients who are on maintenance hemodialysis must be competent in assessing adequacy of dialysis and skillfully manage other issues such as chronic

How to Use the *Standards of Practice and Standards of Professional Performance for Registered Dietitians (Generalist, Specialty, and Advanced)* in Nephrology Care as part of the Professional Development Portfolio Process^a

1. Reflect	Assess your current level of practice and whether your goals are to expand your practice or maintain your current level of practice. Review the Standards of Practice and Standards of Professional Performance document to determine what you want your future practice to be, and assess your strengths and areas for improvement. These documents can help you set short- and long-term professional goals.
2. Conduct learning needs assessment	Once you've identified your future practice goals, you can review the Standards of Practice and Standards of Professional Performance document to assess your current knowledge, skills, behaviors, and define what continuing professional education is required to achieve the desired level of practice.
3. Develop learning plan	Based on your review of the Standards of Practice and Standards of Professional Performance, you can develop a plan to address your learning needs as they relate to your desired level of practice.
4. Implement learning plan	As you implement your learning plan, keep reviewing the Standards of Practice and Standards of Professional Performance document to re-assess knowledge, skills, and behaviors and your desired level of practice.
5. Evaluate learning plan process	Once you achieve your goals and reach or maintain your desired level of practice, it's important to continue to review the Standards of Practice and Standards of Professional Performance document to re-assess knowledge, skills, and behaviors and your desired level of practice.

Figure 5. Application of the Commission on Dietetic Registration *Professional Development Portfolio* Process. ^aThe Commission on Dietetic Registration *Professional Development Portfolio* process is divided into five interdependent steps that build sequentially upon the previous step during each 5-year recertification cycle and succeeding cycles.

kidney disease-mineral and bone disorders (CKD-MBD) and anemia. Additional job responsibilities of the RD in the dialysis setting include quality assessment and performance improvement (QAPI), outcomes research, and protocol/algorithm monitoring. Multiple co-morbidities in the dialysis population (ie, diabetes and cardiovascular disease) require aggressive nutrition intervention and counseling to decrease risk of morbidity and mortality (16). To provide adequate nutrition services, widespread consensus (based on practical experience) indicates that the RD-to-patient ratio should be approximately 1:100 maintenance dialysis patients, not to exceed 1:150 (17). To our knowledge, there is only one state in the United States, Texas, where the Department of State Health Services currently mandates a staffing ratio of one full-time equivalent of dietitian time for up to 100 patients for all modalities (18). In dialysis facilities where the RD has broader responsibilities, including quality improvement, protocol monitoring, and research, the caseload ratio should be adjusted downward.

The CMS released the final rule of the Conditions for Coverage on April 15, 2008 (14). These are requirements that dialysis facilities must follow in order to be Medicare-certified in the United States. The CfC have added additional requirements of the RD, which have resulted in increased time

demands. The new regulations require RD participation in QAPI programs as well as in interdisciplinary team patient care planning. New requirements for follow-up nutrition assessment have also been added. However, clinical trials are still needed to validate the maximum caseload at which RDs can be effective in the provision of MNT without compromising optimal patient care.

Acute kidney injury (AKI) and kidney transplant are additional areas of Nephrology Care requiring the provision of MNT. Patients with AKI undergoing renal replacement therapy present a unique set of nutrition support challenges. These patients must be appropriately nourished without further exacerbating kidney injury (19). Nutrition issues post-renal transplant, many of which are influenced by the immunosuppressant regimen, may include post-transplant diabetes (PTDM), hypertension, infections, mineral and bone disorders (including fractures), cardiovascular disease, dyslipidemia, obesity, and malignancies (20).

ADA AND NKF STANDARDS OF PRACTICE AND STANDARDS OF PROFESSIONAL PERFORMANCE FOR RDS (GENERALIST, SPECIALTY, AND ADVANCED) IN NEPHROLOGY CARE

These standards have been developed, reviewed, and approved by the ADA

Renal Dietitians Practice Group, the Scope of Dietetics Practice Framework Sub-Committee of the Quality Management Committee, the Quality Management Committee of the ADA, and the NKF Council on Renal Nutrition. The RD may use the SOP and SOPP for RDs (Generalist, Specialty and Advanced) in Nephrology Care (see Figures 2 and 3, available online at www.adajournal.org) to:

- identify the competencies needed to provide nutritional care in the nephrology setting;
- self-assess whether the RD has the appropriate knowledge and skill base to provide safe, effective and optimal nutrition care for the RD's level of practice in nephrology care;
- identify the areas in which additional knowledge and skills are needed to practice at the generalist, specialty, or advanced level of nephrology care;
- provide a foundation for public and professional accountability;
- assist management in planning services and resources;
- enhance professional identity;
- guide the development of nephrology-related curriculum, continuing education, job descriptions, and career pathways; and
- assist in complying with CMS standards for RDs working in the dialysis setting.

Role	Examples of use of SOP and SOPP documents by RDs in different practice roles
Clinical practitioner	The hospital employing an RD in general clinical practice has changed the coverage assignment for the RD to cover acute care nephrology services. After reviewing available resources on Medical Nutrition Therapy for patients with acute kidney injury (AKI) receiving continuous renal replacement therapy (CRRT), the RD recognizes the need for specific skills and knowledge. RD reviews the SOP and SOPP to evaluate individual skills and competencies for providing nephrology care to individuals receiving CRRT, identifies learning needs, and sets goals to improve competency.
Manager	A manager who oversees a number of RDs providing care to individuals with chronic kidney disease (CKD) plans to use the SOP and SOPP as a guide for job roles, competencies, performance expectations, and as the basis for identifying training needs and a career ladder for staff professional development and advancement. The manager also recognizes the SOP and SOPP as an important tool to identify and encourage professional development to advanced levels of practice.
Individual not currently employed	After several years out of clinical practice in nephrology, an RD decides to establish a private practice. The RD plans to include Medical Nutrition Therapy in people with chronic kidney disease (CKD). Prior to accepting referrals, the RD uses the SOP and SOPP as a tool for reflection and self-assessment to identify learning needs and to set goals in order to provide quality nephrology care and patient education.
Long Term Care/Skilled Nursing Facility	An RD working part time in a skilled nursing facility notices an increase in the number of new patients who are diabetic and on peritoneal dialysis (PD). The RD uses the SOP and SOPP to evaluate the level of competence needed to provide quality nephrology care to these individuals and consults with the Nephrology RD who works with these PD patients for situations that require a level of care higher than that RD can competently provide.
Researcher	An RD working in a research setting is awarded a grant to demonstrate the impact of oral liquid supplements on outcomes in patients on hemodialysis. The RD uses the SOP and SOPP to recognize their limited understanding of nutrition care in this population and recruits a specialty RD to assist in designing the research protocol.
Educator of Dietetics Practitioners	The Dietetic Internship (DI) Director is reviewing and updating the supervised practice curriculum for concurrence with stated Commission on Accreditation for Dietetics Education (CADE) accreditation standards. The DI Director reviews the SOP/SOPP in Nephrology Care and compares current DI activities with CADE competencies specific to the nephrology/renal rotation. These competencies are discussed with renal preceptors with emphasis on both the CADE competencies and the content of Generalist practice level knowledge and skills.
Public Health Practitioner	A public health practitioner recognizes CKD as a growing worldwide public health problem of increasing prevalence and a public health issue in the local community. The practitioner uses the SOP and SOPP to advocate policies and plan health education programs to raise the identification and treatment of CKD.
Non-Traditional Health Care Practitioner	A health insurance plan recommends Chronic Kidney Disease Certification through The Joint Commission Certificate of Distinction for CKD. The RD uses the SOP and SOPP for RDs in Nephrology Care, among many sources, to evaluate achievement of certification as it pertains to the role of the RD in a CKD setting.

Figure 6. Case examples of Standards of Practice (SOP) and Standards of Professional Performance (SOPP) for the Registered Dietitian (RD) (Generalist, Specialty, and Advanced) in Nephrology Care.

APPLICATION TO PRACTICE

Standards described as specialty level of practice in this document are not equivalent to the CDR certification, CSR. Rather, the CSR designation recognizes the skill level of an RD who has developed nephrology nutrition knowledge and application beyond the generalist practitioner. An RD with a CSR designation is an example of an RD who has demonstrated, at a minimum, specialty level skills as presented in this document. Eligibility criteria for the credential, applications, and other

information are available from CDR (www.cdrnet.org).

The Dreyfus model (21) identifies levels of proficiency from novice to expert during the acquisition and development of knowledge and skills. This is a helpful model for viewing the *level of practice* context for the SOP and SOPP in Nephrology Care. Three stages of proficiency, *novice*, *proficient*, and *expert*, reflect this development process. In the SOP and SOPP, these three stages are represented as generalist, specialty, and advanced practice levels.

Even experienced RDs start at the generalist stage when practicing in a new setting. At the generalist level, the RD is new to nephrology care and is learning the principles that underpin the practice. RDs new to the practice of nephrology care experience a steep learning curve because of the complexity of kidney disease, the impact that kidney disease has on many other organ systems, and the added areas of responsibility in nephrology settings. At the *proficient* stage (specialty level), the RD has developed a

deeper understanding of nephrology care and is able to apply these principles and modify practice according to the situation. At the *expert* stage (advanced practice level), the RD has developed a far more comprehensive understanding of nephrology care and practice that reflects a range of highly developed clinical skills and judgments acquired through a combination of experience and education. Practice at the advanced level requires the application of advanced dietetics knowledge, with practitioners drawing not only on their clinical experience, but also on the experience of the nephrology practitioners in various disciplines and practice settings. Experts have extensive experience, the ability to see the significance and meaning within a contextual whole, and are fluid and flexible in practice. They participate not only in the implementation of nephrology practice, but are instrumental in driving and directing clinical practice. When considering the levels of practice, one must take a holistic view of the SOP and SOPP in Nephrology Care. It is the totality of practice that depicts the level of practice and not any one indicator or standard.

Within the standards document (Figures 2 and 3, available online at www.adajournal.org), an X marked in the Generalist column indicates that an RD who is caring for patients requiring nephrology care is expected to be able to complete this activity and/or take action to seek assistance to learn how to perform at the level of the specified standard. The generalist could be an entry-level RD or experienced RD from another practice area who has newly assumed care of patients with kidney disease. An X marked in the Specialty column indicates that an RD who performs at this level requires a deeper understanding and has the ability to modify therapy to meet the needs of patients in a variety of clinical situations. An X marked in the advanced column indicates that the RD who performs at this level must have a comprehensive understanding and a highly developed range of skills and judgments acquired through a combination of experience and education.

The bolded type standards and indicators originate from ADA's 2008

SOP in Nutrition Care and SOPP documents (1) and should apply to RDs in all three categories. However, in some instances, X's were not placed in all three categories within bolded type standards due to the unique and complex nutrition challenges presented in nephrology care compared with other areas of nutrition care. There are several new un-bolded type indicators identified as applicable to all three levels of practice. It is understood that all RDs in nephrology care are accountable for practice within each of these indicators. However, the depth with which an RD performs each activity will increase as the individual moves beyond the Generalist level.

RDs should review the SOP and SOPP in Nephrology Care at regular intervals to evaluate individual nephrology nutrition knowledge, skill, and competence level. Routine evaluation is critical because it helps to identify opportunities to improve and/or enhance practice and professional performance. This self-evaluation also enables RDs to better utilize the CDR's *Professional Development Portfolio* for self-assessment, planning, improvement, and commitment to lifelong learning (22). The SOP and SOPP in Nephrology Care can be used in each of the five steps in the *Professional Developmental Portfolio* process (see Figure 5). RDs are encouraged to pursue additional training, regardless of practice setting, to expand their personal scope of nephrology practice. Individuals are expected to practice only at the level at which they are competent, and this will vary depending on education, training, and experience (23). RDs in nephrology care are encouraged to pursue additional knowledge and skill training regardless of practice setting and to consider pursuing the CSR credential to promote consistency in practice and performance and continuous quality improvement. See Figure 6 for case examples of how RDs in different roles and at different levels of practice may use the SOP and SOPP in Nephrology Care to guide their knowledge and skill development, and to incorporate those skills into individual practice.

In some instances, components of the SOP and SOPP in Nephrology Care do

not specifically differentiate between specialty and advanced levels of practice. In these areas, it was the consensus of the content experts that the distinctions are subtle and captured in the knowledge, experience, and intuition demonstrated in the context of actual practice at the advanced level. These distinctions combine dimensions of understanding, performance, and value as an integrated whole (24). A wealth of untapped knowledge is embedded in the experience, understanding, and practice of advanced-level dietetic practitioners. Knowledge and skills acquired through continued practice will expand and fully develop. Refinement of clinical judgment and critical thinking skills will occur as advanced-level RDs systematically record what they learn from their own experience. Clinical events are observed by the experienced practitioner, and analyzed to make new connections between events and ideas, thus producing a synthesized whole. Clinical exemplars describe outstanding examples of the actions of individuals in clinical settings or professional activities that have positively changed and enhanced patient care. They include a brief description of the need for action and the process used to change the outcome.

SUMMARY

The SOP and SOPP for RDs in Nephrology Care are key resources for RDs at all levels of practice. In daily practice, dietetics practitioners can consistently demonstrate competency and value as providers of safe, effective, and optimal nephrology care. These standards also serve as a professional resource for self-evaluation and professional development for RDs specializing in nephrology care. These standards are fluid and dynamic and, as such, will be reviewed every 5 years, at a minimum, to incorporate changes in practice. As a quality initiative of the ADA RPG and the NKF CRN, the standards themselves are an application of continuous quality improvement concepts.

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These standards have been formulated to be used for individual self-evaluation and the development of practice guidelines, but not for institutional credentialing or for adverse or exclusionary decisions regarding privileging, employment opportunities or benefits, disciplinary actions, or determinations of negligence or misconduct. These standards do not constitute medical or other professional advice, and should not be taken as such. The information presented in these standards is not a substitute for the exercise of professional judgment by the health care professional. The use of the standards for any other purpose than that for which they were formulated must be undertaken within the sole authority and discretion of the user.

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GLOSSARY TERMS FOR NEPHROLOGY NUTRITION SOP-SOPP

Glossary Terms

Botanical drug products: A botanical drug product consists of single vegetable material or combinations of materials, which may include plant materials (eg, herbs), algae, and macroscopic fungi, that are intended for use in the diagnosis, cure, mitigation, treatment, or prevention of disease in humans. A botanical drug product may also be lawfully marketed as a dietary supplement if it is used to support nutritional status (ie, structure and/or function claims). Structure and function claims are statements that describe the effect a dietary supplement may have on the structure or function of the human body.^a

Change process: A concept in continuous improvement (CI) related to monitoring and evaluating change in organizational structures. PDCA (see acronyms) is an example.

Chronic care model: Comprehensive evidence-based model used in chronic disease prevention and management.^b

Clinical microsystem: A health care framework that focuses on safety and quality of care to reduce medical error and to promote harm reduction.^c

Complementary alternative medicine (CAM): "A group of diverse medical and health care systems, practices, and products that are not presently considered to be part of conventional medicine. Complementary medicine is used with conventional medicine, and alternative medicine is used in place of conventional medicine."^d

Databases: An organized collection of related data stored in computer files that can be accessed and searched by authorized users. Examples in nephrology nutrition include United States Renal Data System (USRDS) and Scientific Registry of Transplant Recipients (SRTR). (See acronyms for more details.)

Differential nutrition diagnosis: A systematic process of considering various possible nutrition diagnoses, considering the characteristics of each diagnosis in comparison to an individual's presentation, and arriving at a specific nutrition diagnosis. Nutrition diagnoses are well defined in the *International Dietetics and Nutrition Terminology Reference Manual*, 2nd edition.^e

Disordered eating: A continuum of eating behaviors ranging from persistent dieting to defined eating disorders such as anorexia nervosa, bulimia nervosa, and binge eating disorder.^f

Evidence-based dietetics practice: The use of systematically reviewed scientific evidence in making food and nutrition practice decisions by integrating best available evidence with professional expertise and client values to improve outcomes.^g

Glomerular Filtration Rate: The quantity of glomerular filtrate formed per unit of time in all nephrons of both kidneys, used as a marker of kidney function.

Healthy People 2010: A document which defines national health objectives to identify the most significant preventable threats to health and to establish national goals to reduce these threats. For the first time in this series, which began in 1979, Healthy People 2010 devotes a full chapter to Chronic Kidney Disease (CKD).^h

Holistic: Emphasizing the relationship between the parts and the whole of a particular entity. In the context of nephrology nutrition, it would suggest a view of kidney disease that considers the impact of chronic kidney disease throughout the human organism.

Integrated disease state management: Combination of evidence-based health care interventions for various disease states that optimizes intervention. Given the common presentation of CKD with diabetes and cardiovascular disease, an integrated approach optimizes interventions and outcomes.ⁱ

Medical informatics: The study of the application of computer technology and statistical analysis to the management of medical information.

Motivational interviewing: An evidence-based approach to counseling in which a directive client-centered counseling style is used to elicit behavior change by helping individuals to explore and resolve ambivalence. It is described as focused and goal-directed.^j

Planned change principles: Using a formal process for integrating a change in practice.

Nutrition Care Process and Model: A systematic problem-solving method that food and nutrition professionals use to think critically and make decisions that address practice-related problems.^k

Nutrition diagnosis: A critical step in the Nutrition Care Process (NCP) in which the practitioner identifies a nutrition problem that can be addressed with nutrition intervention.^e

Nutrition focused physical exam: Part of the assessment phase of the NCP. A skilled practitioner evaluates several aspects of the client's appearance, including hair, skin, eyes, oral cavity, nails, gastrointestinal symptoms (such as appetite, bowel function, nausea, altered taste), neurological findings (confusion, for example), and vital signs.^e

Occipitofrontal circumference (OFC): The technical term for head circumference; "a measurement of the circumference of the head around the occiput, or posterior aspect, of the skull, to the most anterior portion of the frontal bone. The measurement should be taken with a device that cannot be stretched, such as a flexible metal tape measure. As everyone's head is slightly different, the tape should be moved around the circumference of the head in order to obtain the largest possible measurement."^l

Safety alert systems: Putting systems in place so that errors or potential problems are prevented; ie, when a laboratory flags a very high or very low serum chemistry.

Starfruit: Also known as carambola, should not be eaten, even in small amounts, by people with chronic kidney disease. It can cause several symptoms including insomnia, hiccups, agitation, muscle weakness, confusion, consciousness disturbances of various degrees, seizures, and cardio-respiratory arrest possibly leading to death. Starfruit originated in Southeast Asia and is readily available in Taiwan. The various types contain different toxins including a powerful neurotoxin that builds up in blood and can cause irreversible damage. Currently there is no effective treatment available.

Acronyms

DOPPS—Dialysis Outcomes and Practice Patterns Study: A multi-national prospective cohort study of medical practices in managing hemodialysis (HD) patients. Its goal is to improve patient outcomes, life expectancy on HD, and quality of life (QOL). http://www.dopps.org/dopps_default.aspx. Accessed April 15, 2009.

DPBRN—Dietetics Practice Based Research Network: A network of registered dietitians within the American Dietetic Association (ADA) organized to promote dietetics research. Goals are to identify, design, and implement projects to address current issues in dietetics practice; and to allow individual practitioners to contribute to these research projects in their current practice settings. http://www.eatright.org/cps/rde/xchg/ada/hs.xsl/home_11041_ENU_HTML.htm. Accessed April 15, 2009.

IDPN—Intradialytic parenteral nutrition: Parenteral nutrition infusion delivered during HD treatments.

IPN—Intraperitoneal nutrition: Parenteral nutrition provided by an amino acid solution in a standard peritoneal dialysate bag, infused into the peritoneal cavity in the same manner that a typical dextrose-based peritoneal dialysis solution would be administered.^m

KDIGO—Kidney Disease: Improving Global Outcomes: A nonprofit foundation established in 2003 to promote coordination, collaboration, and integration of initiatives to develop and implement clinical practice guidelines. Its goal is to improve the care and outcomes for kidney disease patients worldwide. The National Kidney Foundation (NKF) participated in the founding of KDIGO which is governed by an internationally-based board of directors. <http://www.kdigo.org/>. Accessed April 15, 2009.

KDOQI—Kidney Disease Outcomes Quality Initiative: A coalition of professional and patient-focused organizations related to nephrology which was created in the mid-1990s to develop and maintain evidence-based guidelines for all stages and all aspects of chronic kidney disease. NKF actively participates in developing and promoting KDOQI and its guidelines. <http://www.kidney.org/professionals/kdoqi/>. Accessed April 15, 2009.

NAPRTCS—North American Pediatric Renal Trials and Collaborative Studies: Its goal is to follow the natural history and the clinical course of chronic kidney disease in children in North America. This includes children who undergo chronic hemodialysis, peritoneal dialysis, and who receive kidney transplants. <https://web.emmes.com/study/ped/>. Accessed April 15, 2009.

NIDDK—National Institute of Diabetes, Digestive and Kidney Diseases: A part of the National Institutes of Health dedicated to basic and clinical research in diabetes, digestive diseases, and kidney disease. <http://www2.niddk.nih.gov/>. Accessed April 15, 2009.

PDCA cycle—Plan Do Check Act cycle: A 4-step cycle used often in continuous improvement; also known as the Deming cycle. <http://www.asq.org/learn-about-quality/continuous-improvement/overview/overview.html>. Accessed April 15, 2009.

SRTR—Scientific Registry of Transplant Recipients: Established to support solid organ transplant within the United States. Gathers data from transplant centers on many aspects of care, including wait lists, etiologies of end-stage disease, types of transplants performed and outcomes. These data are available to all via the SRTR Web site. <http://www.ustransplant.org/>. Accessed April 15, 2009.

USRDS—The United States Renal Data System: Funded by the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) in conjunction with the Centers for Medicare & Medicaid Services (CMS). It collects, analyzes, and distributes information about ESRD in the United States. It works with CMS, the United Network for Organ Sharing (UNOS), and the ESRD networks to gather data and to provide access to accurate information about ESRD care in the United States. <http://www.usrds.org/>. Accessed April 15, 2009.

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^dNational Center for Complementary and Alternative Medicine (NCCAM) <http://nccam.nih.gov/>. Accessed April 15, 2009.

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^gAmerican Dietetic Association Definition of Terms. http://www.eatright.org/ada/files/Definition_of_Terms_ALL_06012009.pdf. Accessed April 15, 2009.

^hHealthy People 2010: History. <http://www.healthypeople.gov/About/history.htm>. Accessed April 15, 2009.

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Standards of Practice and Standards of Professional Performance for Registered Dietitians (Generalist, Specialty and Advanced) in Nephrology Care

Standards of Practice (SOP) in Nutrition Care are authoritative statements that describe a competent level of practice demonstrated through nutrition assessment, nutrition diagnosis (problem identification), nutrition intervention (planning, implementation), and nutrition outcomes monitoring and evaluation (four separate standards) and the responsibilities for which Registered Dietitians (RDs) are accountable. The SOP in Nephrology Care presuppose that the RD uses critical thinking skills, analytical abilities, theories, best available research findings, current accepted dietetics and medical knowledge, and the systematic holistic approach of the nutrition care process as they relate to the standards. Standards of Professional Performance (SOPP) in Nephrology Care are authoritative statements that describe a competent level of behavior in the professional role, including activities related to provision of services; application of research; communication and application of knowledge; utilization and management of resources; quality in practice; and continued competence and professional accountability (six separate standards).

SOP and SOPP for RDs in Nephrology Care are complementary sets of standards - both serve to describe the practice and professional performance of dietitians. All indicators may not be applicable to the practice of all RDs or to all practice settings and situations. RDs must be aware of federal and state laws affecting their practice as well as organizational policies and guidelines. The standards are a resource but do not supersede laws, policies, and guidelines.

The term **client** is used in these standards as a universal term. Client could also mean patient, customer, participant, consumer, or any individual or group who receives nephrology care. Nephrology care is provided to individuals of all ages. In addition, it is recognized that the family and primary caregiver(s) of clients of all ages, including individuals with special health care needs, play critical roles in overall health. The term **“appropriate”** is used in the standards to mean: Selecting from a range of best practices or evidence-based guidelines, one or more of which would give an acceptable result in the circumstances. **Evidence-based guidelines are determined by scientific evidence or, in the absence of scientific evidence, expert opinion or, in the absence of expert opinion, professional standards** (National Committee for Quality Assurance [NCQA]. QI9: Clinical Practice Guidelines, Element A: Evidence-based guidelines. 2009 Standards and Guidelines for Accreditation of Health Plans. Washington, DC.)

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 American Dietetic Association SOP in Nutrition Care and SOPP have been adapted to reflect three levels of practice (generalist, specialty, and advanced) in nephrology care. In addition, the core indicators have been expanded upon to reflect the unique competence expectations of the RD in nephrology care.

Standards described as specialty level of practice in this document are not equivalent to the CDR certification, Board Certified Specialist in Renal Nutrition (CSR). Rather, the CSR designation recognizes the skill level of an RD who has developed nephrology nutrition knowledge and application beyond the generalist practitioner. An RD with a CSR designation is an example of an RD who has demonstrated, at a minimum, specialty level skills as presented in this document.

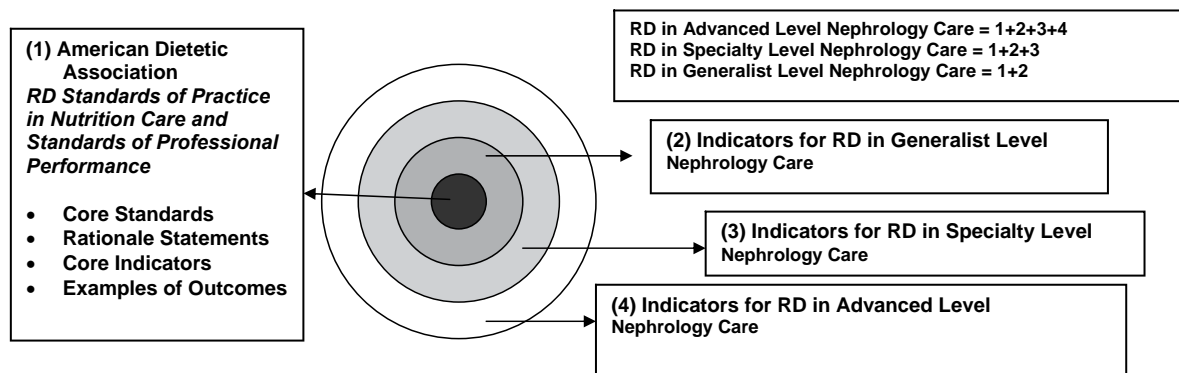


Figure 1. Standards of Practice and Standards of Professional Performance for Registered Dietitians (Generalist, Specialty, and Advanced) in Nephrology Care.

Standards of Practice and Standards of Professional Performance for Registered Dietitians in Nephrology Care

Introduction

The Standards of Practice (SOP) and Standards of Professional Performance (SOPP) for Registered Dietitians (RDs) in Nephrology Care documents are components of the American Dietetic Association's overall Nutrition Care Process (NCP)* and are intended to serve as a professional evaluation resource. They will allow individuals to assess their current level of practice and determine education and training required to advance to a higher level of practice.† This document may also be used by employers and policy-makers to define three levels of practice: the generalist practice dietitian working with nephrology clients, the specialty practice nephrology dietitian, and finally, the advanced practice nephrology dietitian.

The SOP and SOPP answer the question, "What are the skills, competencies and/or knowledge RDs need to provide safe and effective care in nephrology nutrition?" These standards also address quality and risk management issues and optimization of outcomes. For example, when the SOP are used to provide nutrition care, the outcomes that are monitored and evaluated guide each step of the NCP.

Other supporting documents of the NCP in Nephrology Care include the Medical Nutrition Therapy (MNT) Protocols for Chronic Kidney Disease (CKD). These standards are intended to serve as professional evaluation resources. Alternatively, the MNT Protocols are practice tools that provide the specific content to deliver nutrition care for a client using the NCP. The SOP and SOPP for Nephrology Care cover the continuum of care (acute kidney injury and all stages of CKD including transplant); whereas the MNT Protocols focus solely on renal nutrition services provided in early stages of CKD and for post renal transplant.‡

These standards will be re-evaluated and revised every 5 years to reflect any major advances in nephrology care and interventions, general nutrition, and nephrology nutrition.

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* Lacey K, Pritchett E. Nutrition Care Process and Model: ADA adopts road map to quality care and outcomes management. *J Am Diet Assoc.* 2003;103:1061-1072.

† The American Dietetic Association. American Dietetic Association Revised 2008 Standards of Practice for Registered Dietitians in Nutrition Care; Standards of Professional Performance for Registered Dietitians; Standards of Practice for Dietetic Technicians, Registered, in Nutrition Care; and Standards of Professional Performance for Dietetic Technicians, Registered. *J Am Diet Assoc.* 2008;108:1538-1542.e9.

‡ American Dietetic Association. *Medical Nutrition Therapy Evidence-Based Guides for Practice. Chronic Kidney Disease (Non-Dialysis) Medical Nutrition Therapy Protocol.* Chicago, IL: American Dietetic Association; 2002.

Figure 2. Standards of Practice and Standards of Professional Performance for Registered Dietitians in Nephrology Care.

Standards of Practice for Registered Dietitians in Nephrology Care

Standard 1: Nutrition Assessment

The RD^a in nephrology care obtains pertinent information that allows identification of nutrition-related problems and quantification of overall nutritional status.

Rationale: Nutrition Assessment is a systematic process of obtaining, verifying, and interpreting data in order to make decisions about the nature and cause of nutrition-related problems. It is initiated by referral and/or screening of individuals or groups for nutritional risk factors. Nutrition Assessment is an on-going, dynamic process that involves not only initial data collection, but also continual reassessment and analysis of the client or community's needs assessment. Nutrition Assessment provides the foundation for the nutrition diagnosis at the next step of the Nutrition Care Process.

Indicators for Standard 1: Nutrition Assessment			The "X" signifies the indicators for the level of practice		
			Generalist	Specialty	Advanced
Bold Font Indicators are adapted from ADA^b Core RD Standards of Practice					
1.1	Evaluates dietary intake for factors that affect health conditions including nutrition risk		X	X	X
	1.1A	Evaluates adequacy and appropriateness of food and fluid intake (ie, macro and micronutrients; meal patterns)	X	X	X
	1.1A1	Evaluates changes in appetite or usual dietary intake patterns (eg, as a result of the uremia, oral aversion, pica behavior, adequacy of dialysis treatment, gastrointestinal problems, co-morbid conditions, or dialysis schedule)	X	X	X
	1.1A2	Evaluates meal-planning issues	X	X	X
	1.1A3	Evaluates client's understanding of kidney disease dietary modifications, particularly when superimposed on co-morbidities (eg, diabetes, hypertension)	X	X	X
	1.1A4	Ensures client understands treatment options of disease state and the nutritional implications	X	X	X
	1.1A5	Based on stage of kidney disease, evaluates adequacy of nutrient intake using appropriate tools, in relationship to physical needs and laboratory indices		X	X
	1.1B	Evaluates adequacy and appropriateness of current diet prescription	X	X	X
	1.1B1	Evaluates nutrition therapy changes and gives direction based on lab and physical indices and co-morbidities		X	X
	1.1B2	Identifies the need to tailor data collection based on health condition history and present state; identifies a need for transition and factors that might influence the plan			X
1.2	Evaluates health and disease condition(s) for nutrition-related consequences		X	X	X
	1.2A	Evaluates medical and family history and co-morbidities	X	X	X
	1.2A1	Evaluates medical history, etiology of kidney disease, and health care access/availability	X	X	X
	1.2A2	Evaluates family history of kidney disease and other risk factors (eg, CVD, ^c ethnicity, UTI, ^d urolithiasis)	X	X	X
	1.2A3	Evaluates age-related nutrition issues and co-morbidities (eg, diabetes, obesity, CHF, ^e HTN, ^f dyslipidemia, depression, GI ^g diseases, oral aversion, ability to chew/swallow foods)	X	X	X
	1.2A4	Evaluates for evidence of malnutrition (eg, history of weight loss, decline in rate of growth and weight gain, OFC, ^h prolonged poor intake, laboratory trends)	X	X	X
	1.2A5	Anticipates potential problems related to chronic or acute conditions		X	X
	1.2A6	Checks for symptoms of or potential for coexisting disease or nutrition conditions related to present nutrition/disease state			X

Figure 2. Continued

Indicators for Standard 1: Nutrition Assessment				The “X” signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA^b Core RD Standards of Practice				Generalist	Specialty	Advanced
	1.2B	Evaluates physical findings (physical or clinical exams)		X	X	X
		1.2B1	Evaluates Anthropometric data (eg, BMI,ⁱ BW,^j frame size)	X	X	X
		1.2B2	Uses nutrition assessment tools that include weight and growth assessment appropriate for age, dietary intake, GI symptoms, functional capacity, metabolic stress, fat and muscle stores	X	X	X
		1.2B3	Evaluates body composition measures	X	X	X
		1.2B4	Uses nutrition focused physical exam that includes but is not limited to: oral and perioral structures; skin and related structures; alterations in taste, smell, and dentition		X	X
		1.2B5	Translates findings into recommendations for nutrient replacement as needed			X
	1.2C	Evaluates medication management (prescription, over-the-counter, and botanical medications; medication allergies; medication/food and nutrient interaction and adherence; botanical and food and nutrient interaction)		X	X	X
		1.2C1	Evaluates all medications and dietary supplements for impact on nutritional status and safety	X	X	X
		1.2C2	Evaluates dosage and timing of medications in relation to impact on nutritional status and to kidney disease and co-morbid conditions		X	X
		1.2C3	Evaluates drug/nutrient and drug/drug interactions, including the mode of administration		X	X
		1.2C4	Evaluates complementary and alternative medicine usage, safety, and efficacy		X	X
		1.2C5	Evaluates frequency and severity of episodes that require medication adjustment (eg, hyperkalemia, hyperphosphatemia)		X	X
		1.2C6	Evaluates current guidelines and establishes recommendations for use; utilizes case studies for validation			X
		1.2C7	Evaluates overall medication management in the context of integrated disease state management			X
		1.2C8	Seeks out drug–drug/botanical and drug–nutrient interactions in context of integrated disease state management (ensures therapy integration for multiple disease states—CKD, ^k CVD, DM ^l)			X
		1.2C9	Develops and supervises protocols/algorithms used in medication management			X
	1.2D	Evaluates complications and risks		X	X	X
		1.2D1	Reviews evidence-based nutrition indicators of nephrology complications (eg, BUN, ^m creatinine, CO ₂ , ⁿ albumin, prealbumin, hemoglobin, ferritin, iron saturation, calcium, phosphorus, parathyroid hormone, vitamin D level (25-hydroxyvitamin D level when indicated), electrolytes, lipids, glucose, blood pressure)	X	X	X
		1.2D2	Assesses actual or risk of developing acute issues (eg, uremia, protein depletion, calorie depletion, hyper/hypokalemia, hyper/hypoglycemia, anorexia, dysgeusia, inflammation, anemia, calcium/phosphorus imbalance)	X	X	X
		1.2D3	Assesses actual or risk of developing chronic issues and late effects (eg, secondary hyperparathyroidism, mineral and bone disorder, calcific uremic arteriolopathy, dyslipidemia, neuropathy, cardiac damage, inflammation, growth failure)		X	X

Figure 2. Continued

Indicators for Standard 1: Nutrition Assessment				The "X" signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA^b Core RD Standards of Practice				Generalist	Specialty	Advanced
	1.2D4	Assesses long-term complications of diabetes (eg, foot ulcers, gastroparesis)			X	X
	1.2D5	Directs integrated care interventions of actual or risk of developing acute issues				X
	1.2D6	Directs integrated care interventions of actual or risk of developing chronic issues and late effects				X
	1.2D7	Directs nutrition management of long-term complications of diabetes within the context of integrated care				X
1.2E	Evaluates diagnostic tests, procedures, and evaluations			X	X	X
	1.2E1	Evaluates nutrition implications of diagnostic tests and therapeutic procedures (eg, dietary modification/and or nutrition support)		X	X	X
	1.2E2	Utilizes biochemical data (including appropriate eGFR ⁹) to evaluate nutritional status in relation to stages of kidney disease			X	X
	1.2E3	Evaluates adequacy of dialysis (eg, formal UKM ⁹ or eKt/V ⁹) and viability of dialysis access and prescription			X	X
	1.2E4	Evaluates issues related to dialysis access and dialysis prescription that include nutrition implications			X	X
	1.2E5	Directs and coordinates consistent integrated disease state intervention approach with protocols, for example, to optimize patient care				X
	1.2E6	Directs and coordinates new strategies to ensure adequacy of dialysis				X
	1.2E7	Utilizes tests, procedures, and evaluations and incorporates complex decision making in the context of integrated disease state management				X
1.2F	Evaluates physical activity habits and restrictions			X	X	X
	1.2F1	Assesses effect of planned treatment on usual activity level, ability to perform ADLs ⁷ and achievement of developmental milestones for pediatrics		X	X	X
	1.2F2	Assesses ability of current age-appropriate physical activities to facilitate rehabilitation, promote wellness, and improve QOL ⁸		X	X	X
1.2G	Assesses nutrition related issues on a population level using population-based surveys. (eg, DOPPS,[†] NHANES⁹)			X	X	X
	1.2G1	Evaluates and applies to practice			X	X
	1.2G2	Applies to practice in conjunction with other advanced practices				X
1.3	Evaluates psychosocial, socioeconomic, functional, and behavioral factors related to food access, selection, preparation, and understanding of health condition and disease state			X	X	X
1.3A	Uses validated tools to assess developmental, functional and mental status, and cultural, ethnic, and lifestyle assessments			X	X	X
	1.3A1	Evaluates risk for depression		X	X	X
	1.3A2	Uses appropriate family and community resources for support		X	X	X
	1.3A3	Evaluates risk/history of disordered eating and related factors (eg, medication adjustments, food issues, physical activity)		X	X	X
	1.3A4	Evaluates history of substance abuse (eg, alcohol, tobacco, drugs, pica)		X	X	X
	1.3A5	Assesses nonapparent barriers or conflicts that would interfere with food access, selection, preparation				X

Figure 2. Continued

Indicators for Standard 1: Nutrition Assessment			The "X" signifies the indicators for the level of practice		
			Generalist	Specialty	Advanced
Bold Font Indicators are adapted from ADA^b Core RD Standards of Practice					
1.4	Evaluates client knowledge, readiness to learn and potential for behavior changes		X	X	X
	1.4A	Evaluates history of previous nutrition care services/MNT^v	X	X	X
	1.4A1	Evaluates individualized short-term and long-term goals for nutrition intervention	X	X	X
	1.4A2	Evaluates behavioral mediators (or antecedents) related to dietary intake (ie, attitudes, self-efficacy, knowledge, intentions, readiness and willingness to change, perceived social support, social, and psychological issues affecting adherence, developmental issues)		X	X
	1.4A3	Evaluates self-care skills and behaviors, other lifestyle factors, and client-centered goals for living with kidney disease and modality of choice		X	X
	1.4B	Directs and coordinates assessment trending that optimizes client care			X
	1.4C	Identifies underlying or nonapparent barriers or failures that relate to nutrition therapy			X
	1.4D	Identifies learning style/interaction needs to facilitate successful MNT			X
1.5	Evaluates the nutrition implications of the client's treatment plan (eg, dialysis, transplantation, no treatment)		X	X	X
1.6	Identifies standards by which data will be compared		X	X	X
1.7	Identifies possible problem areas to formulate nutrition diagnoses		X	X	X
	1.7A	Identifies general dietetics complications such as food allergies, intolerances, preferences, and issues of clinical significance	X	X	X
	1.7B	Assesses more complex issues related to food intake and clinical complications		X	X
	1.7C	Assesses most complex issues related to food intake and clinical complications and their management within the multidisciplinary treatment			X
1.8	Documents and communicates:				
	1.8A	Date and time of assessment in relation to date of admission	X	X	X
	1.8B	Pertinent data collected and comparison with standards	X	X	X
	1.8C	Clients' perceptions, values, and motivation related to presenting problems	X	X	X
	1.8D	Changes in client level of understanding, food-related behaviors and other outcomes for appropriate follow-up	X	X	X
	1.8E	Reason for discharge/discontinuation or referral if appropriate	X	X	X
	1.8E1	Documents appropriate nutrition information when status changes (ie, discharge or transfer to another clinic, or change in modality)	X	X	X
	1.8E2	Documents pertinent nutrition information and coordination of nutrition therapy within individual care setting (ie, extended care, day care/school)	X	X	X
	1.8F	Client adherence as evidenced by biochemical parameters and other nutritional indicators	X	X	X

Examples of Outcomes for Standard 1: Nutrition Assessment for Registered Dietitians in Nephrology Care

- Appropriate assessment tools and procedures (matching the assessment method to the situation) are implemented
- Assessment tools are applied in valid and reliable ways
- Appropriate data are collected
- Data are validated
- Data are organized and categorized in a meaningful framework that relates to nutrition problems
- Effective interviewing methods are utilized
- Problems that require consultation with or referral to another provider are recognized
- Documentation and communication of assessment are relevant, accurate, timely, comprehensive, and specific

Figure 2. Continued

Standards of Practice for Registered Dietitians in Nephrology Care

Standard 2: Nutrition Diagnosis

The RD in nephrology care identifies and describes specific nutrition problem(s) that the RD is responsible for treating independently.

Rationale: Nutrition Diagnosis is the second of four steps in the Nutrition Care Process. At the end of the assessment step, data are grouped, analyzed, and synthesized. This will reveal a nutrition diagnosis category from which to formulate a specific nutrition diagnostic statement. There is a difference between a nutrition diagnosis and a medical diagnosis. A nutrition diagnosis evolves or develops as the client response changes, whereas a medical diagnosis does not change as long as the disease or condition exists. The nutrition diagnosis(es) establishes a link to setting realistic and measurable goals for outcomes, selecting appropriate interventions, and tracking progress in attaining those expected outcomes.

Indicators for Standard 2: Nutrition Diagnosis		The "X" signifies the indicators for the level of practice		
		Generalist	Specialty	Advanced
2.1 Derives the nutrition diagnosis from the assessment data		X	X	X
2.1A	Identifies and labels nutrition problems	X	X	X
2.1B	Determines etiology (cause/contributing risk factors) for each problem	X	X	X
	2.1B1 Evaluates multiple factors that impact nutrition diagnosis(es) to identify the major cause(s) likely to respond to intervention			X
2.1C	Supports each diagnosis with signs and symptoms	X	X	X
2.1D	Utilizes complex assessment data and information, including pre-existing factors, complex co-morbidities, impact of other therapies		X	X
2.2 Ranks the nutrition diagnoses		X	X	X
2.2A	Uses evidence-based protocols and guidelines to rank nutrition diagnoses in order of urgency	X	X	X
2.2B	Uses specialty level critical thinking skills and experience when ranking nutrition diagnoses in order of their importance and urgency for the client (eg, selects from a range of possibilities with additional consideration for the prevention of complications of kidney disease such as hyperkalemia, fluid imbalance, severe hypo/hypertension, mineral and bone disorder, anemia, CVD, altered nutritional status, altered weight status or growth velocity, micro/macrovascular disease)		X	X
2.2C	Uses advanced critical thinking skills and experience when ranking nutrition diagnoses in order of their importance and urgency for the client (ie, reflecting the holistic focus of kidney disease as a complex disorder that affects many body systems)			X

Figure 2. Continued

Indicators for Standard 2: Nutrition Diagnosis		The "X" signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Practice		Generalist	Specialty	Advanced
2.3	Discusses nutrition diagnosis(es) with client(s), family, and/or other health care professionals when possible and appropriate	X	X	X
2.4	Documents the nutrition diagnosis(es) in a written statement(s) that includes the problem, etiology, and signs and symptoms (whenever possible). This may be referred to as the PES statement, which is the format commonly used: Problem (P), the Etiology (E), and the Signs and Symptoms (S).	X	X	X
2.4A	Uses nutrition diagnosis terminology whenever possible (ie, excessive fluid intake)	X	X	X
2.4B	Presents the nutrition diagnosis in a PES statement (eg, altered nutrition-related labs related to nutrition knowledge deficit, as shown by labs and by diet history)	X	X	X
2.5	Re-evaluates and revises nutrition diagnoses when additional assessment data become available	X	X	X
2.5A	Monitors and evaluates client status changes	X	X	X

Examples of Outcomes for Standard 2: Nutrition Diagnosis for Registered Dietitians in Nephrology Care	
<ul style="list-style-type: none"> ● A Nutrition Diagnostic Statement that is: <ul style="list-style-type: none"> ○ Clear and concise ○ Specific—client centered ○ Accurate—relates to the etiology ○ Based on reliable and accurate assessment data ○ Includes date (all settings) and time (acute care) ● Documentation of nutrition diagnosis(es) is relevant, accurate, and timely ● Documentation of nutrition diagnosis(es) is revised and updated as more assessment data become available 	

Figure 2. Continued

Standards of Practice for Registered Dietitians in Nephrology Care

Standard 3: Nutrition Intervention

The RD in nephrology care identifies and implements appropriate, purposefully planned actions designed with the intent of changing a nutrition-related behavior, risk factor, environmental condition, or aspect of health status for an individual, target group, or the community at large.

Rationale: Nutrition Intervention involves (a) selecting, (b) planning, and (c) implementing appropriate actions to meet clients' nutrition needs. The nutrition interventions selected are driven by the nutrition diagnosis and provides the basis upon which outcomes are measured and evaluated. An intervention encompasses a specific set of activities and associated materials used to address the problem. The RD may actually perform the interventions, or may assign or coordinate the nutrition care that others provide. All interventions must be based on scientific principles and rationale and when available supported by a high level of quality research (ie, evidence-based).

The RD in nephrology care works collaboratively with the client, family, or caregiver to create a realistic plan that has a good probability of positively influencing the diagnosis/problem. This client-driven process is a key element in the success of this step, distinguishing it from previous planning steps that may or may not have involved the client to this degree of participation.

Indicators for Standard 3: Nutrition Intervention		The "X" signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Practice		Generalist	Specialty	Advanced
Plans the nutrition intervention:				
3.1	Prioritizes the nutrition diagnoses based on severity of problem, likelihood that nutrition intervention will impact problem, and clients' perception of importance	X	X	X
	Prioritization considerations may include:			
3.1A	Urgency of the issue/evidence of abnormal nutrition (eg, history of unhealthy weight loss/gain/growth rate, prolonged poor intake, laboratory trends, physical signs, and symptoms)	X	X	X
3.1B	Co-morbid diseases or conditions (eg, diabetes, CVD, anemia, mineral and bone disorders, GI disorders, and altered weight/growth status)	X	X	X
3.1C	Actual or risk for acute complications (eg, hyperkalemia, fluid imbalance, severe hypo/hypertension)	X	X	X
3.1D	Client's ability and willingness to implement and adhere to nutrition plan	X	X	X
3.1E	Actual or risk for chronic complications (eg, mineral and bone disorder, anemia, CVD, altered nutritional status, altered weight status or growth velocity, micro/macrovacular disease)		X	X
3.1F	Emerging therapies		X	X
3.1G	Nontraditional intervention(s) to achieve intended outcome (ie, integration of botanical medicine, complementary/alternative therapies or behavior management strategies not typically used in the CKD population)			X
3.2	Consults national/international evidence-based practice guidelines (eg, NKF K/DOQI,^W KDIGO,^X ADA's evidence analysis library) for appropriate target value(s) that may indicate acceptable management of the disease or conditions as defined and supported in the literature	X	X	X
3.2A	Adjusts guidelines/protocols based on the individual and progress of intervention		X	X
3.2B	Evaluates and selects appropriate guidelines		X	X
3.2C	Contributes to the development of intervention guidelines		X	X
3.2D	Recognizes when it is appropriate and safe to deviate from established guidelines			X
3.2E	Leads the development and/or identification of intervention guidelines and outcome measures on a state, regional, or national level			X

Figure 2. Continued

Indicators for Standard 3: Nutrition Intervention			The "X" signifies the indicators for the level of practice		
			Generalist	Specialty	Advanced
Bold Font Indicators are adapted from ADA Core RD Standards of Practice					
Plans the nutrition intervention:					
3.3	Determines client-focused expected outcomes for each nutrition diagnosis		X	X	X
	3.3A	Develops expected outcomes in observable and measurable terms that are clear, concise, and reasonable to client circumstances, client-centered, appropriate, and specific in relation to treatments and outcomes	X	X	X
	3.3B	Anticipates how nutrition intervention may minimize treatment-related side effects, treatment delays, and the need for hospital admission			X
3.4	Consults with client, caregivers, or other health professionals and refers to policies and program standards as appropriate throughout the planning process		X	X	X
	3.4A	Organizes and leads communication with the family, acts as case manager to organize care, in collaboration with the IDT ^y			X
3.5	Defines intervention plan (eg, write a nutrition prescription, develop an education plan or community program, create policies that influence nutrition programs and standards)		X	X	X
	3.5A	Considers pharmacotherapy	X	X	X
	3.5A1	Reviews medications commonly used in CKD (ie, mineral and bone disorder, anemia management, growth failure)	X	X	X
	3.5A2	Recognizes the impact of pharmacotherapy		X	X
	3.5A3	Recognizes need for adjustment of pharmacotherapy based on integration of nutrition, physical activity, treatment schedule, medication and ongoing laboratory monitoring and response, personal routine		X	X
	3.5B	Reviews basic nutrition information; emergency diet guidelines (emergency/medication supplies in the home)	X	X	X
	3.5B1	Provides information beyond food intake (medication adjustment)		X	X
	3.5C	Considers physical activity and functional status psychomotor development	X	X	X
	3.5D	Considers dietary intake to establish nutrition goals including confounding factors (ie, psychosocial, home situation/support, meals away from home)	X	X	X
	3.5E	Prepares client for change in renal replacement therapy options		X	X
	3.5F	Creates or facilitates the development of clinical policies that influence standards/programs			X
	3.5G	Works with administrators and staff to develop outcome-driven policies			X

Figure 2. Continued

Indicators for Standard 3: Nutrition Intervention		The "X" signifies the indicators for the level of practice		
		Generalist	Specialty	Advanced
Bold Font Indicators are adapted from ADA Core RD Standards of Practice				
Plans the nutrition intervention:				
3.6	Details the nutrition prescription and ensures intervention plan content is based on best available evidence (ie, nationally/internationally developed guidelines, published research, evidence-based libraries/databases)	X	X	X
3.6A	Selects specific intervention strategies that are focused on the etiology of the problem and that are known to be effective based on best current knowledge and evidence	X	X	X
	3.6A1 Selects appropriate formula for enteral feedings based on nutritional status, laboratory data, age, etc	X	X	X
	3.6A2 Adjusts rate/volume of enteral feedings based on response to therapy, tolerance, medical condition, and renal replacement therapy	X	X	X
	3.6A3 Recommends modular components for feedings as needed to meet nutritional needs, maintain optimal biochemical control	X	X	X
	3.6A4 Recommends parenteral, intraperitoneal nutrition, intradialytic parenteral nutrition, and composition of formula if unable to meet nutritional needs orally and/or enterally		X	X
	3.6A5 Manages enteral and parenteral nutrition including formula selection and adjustment based on client labs, etc, using physician approved protocols consistent with facility policies			X
3.7	Defines time and frequency of care including intensity, duration, and follow-up	X	X	X
3.7A	Determines intensity of change and uses that to determine duration and follow-up		X	X
3.7B	Develops guidelines for timing of intervention and follow-up			X
3.8	Utilizes standardized language for describing intervention	X	X	X
3.9	Identifies resources and/or referrals needed	X	X	X
3.9A	Identifies resources to assist clients with CKD in using education services and community programs appropriately (eg, support groups, health care services, meal programs, acceptable Web sites)	X	X	X
3.9B	Identifies referrals as needed to assist client with CKD-related issues (eg, financial, psychosocial, and functional status)	X	X	X
3.9C	Contributes to development of client education materials/classes	X	X	X
3.9D	Leads the development of client education materials/classes		X	X

Figure 2. Continued

Indicators for Standard 3: Nutrition Intervention		The “X” signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Practice		Generalist	Specialty	Advanced
Implements the nutrition intervention:				
3.10	Communicates and documents the integrated plan of nutrition and nephrology-related care utilizing standardized language	X	X	X
	3.10A Facilitates and fosters active communication, learning, partnerships, and collaboration with the health care team and others as appropriate		X	X
	3.10B Identifies and seeks out opportunities for interdisciplinary and interagency collaboration, specific to the individual's needs			X
	3.10C Leads/facilitates the development of a process to transfer nutrition care plans and nutrition-related client data between acute care units, other units, and ambulatory care			X
3.11	Initiates the integrated plan of nutrition and nephrology-related care	X	X	X
	3.11A Utilizes appropriate behavior change theories (eg, motivational interviewing, behavior modification, modeling) to facilitate self-care strategies	X	X	X
	3.11B Uses stages of behavior change as a guide to assess the client's readiness to learn and adjusts counseling style accordingly	X	X	X
	3.11C Uses critical thinking and synthesis skills to guide decision-making in complicated, unpredictable, and dynamic situations		X	X
3.12	Continues data collection and modifies the plan of care as needed	X	X	X
	3.12A Conducts comprehensive analysis of data trends to modify the plan of care		X	X
	3.12B Develops policies for data analysis			X
3.13	Individualizes nutrition and nephrology-related interventions to the setting and client	X	X	X
	3.13A Uses interpersonal, teaching, training, coaching, counseling, or technological approaches and tools as appropriate	X	X	X
	3.13B Uses critical thinking and synthesis skills for combining multiple intervention approaches as appropriate		X	X
	3.13C Utilizes experiential and current body of advanced knowledge about the client population to individualize the strategy for complex interventions			X
3.14	Collaborates with other colleagues and health care professionals	X	X	X
	3.14A Facilitates and fosters active communication, learning, partnerships and collaboration with the nephrology team and other health care professionals	X	X	X
	3.14B Utilizes physician approved protocols consistent with facility policies to manage medication therapies to treat nutrition related conditions such as anemia and mineral and bone disorders		X	X
	3.14C Utilizes physician approved protocols consistent with facility policies to manage nutrition support therapies		X	X

Figure 2. Continued

Indicators for Standard 3: Nutrition Intervention		The "X" signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Practice		Generalist	Specialty	Advanced
Implements the nutrition intervention:				
3.15	Follows up and verifies that implementation is occurring and needs are being met	X	X	X
	3.15A Communicates with IDT to verify progress and adjusts strategies	X	X	X
	3.15B Collaborates with IDT to verify progress and adjusts strategies		X	X
	3.15C Directs the integration of the clients progress within the IDT			X
3.16	Revises strategies as changes in condition/response occurs	X	X	X
	3.16A Makes adjustments in complicated situations		X	X
	3.16B Makes adjustments in unpredictable and dynamic situations			X
3.17	Documents and Communicates:	X	X	X
	3.17A Date and time, as appropriate for care setting	X	X	X
	3.17B Specific treatment goals and expected outcomes	X	X	X
	3.17C Interventions and recommendations	X	X	X
	3.17D Any adjustments of plan and justifications	X	X	X
	3.17E Client receptivity and ability to change	X	X	X
	3.17F Client comprehension	X	X	X
	3.17G Barriers to change	X	X	X
	3.17H Referrals made and resources used	X	X	X
	3.17I Pertinent information related to providing care and monitoring progress over time	X	X	X
	3.17J Plans for follow-up and frequency of care	X	X	X
	3.17K Rationale for discharge or referral if applicable	X	X	X

Examples of Outcomes for Standard 3: Nutrition Intervention For Registered Dietitians In Nephrology Care

- Appropriate prioritizing and setting of goals/expected outcomes
- Appropriate nutrition prescription or plan is developed
- Interdisciplinary connections are established
- Nutrition interventions are delivered and actions are carried out
- Documentation and communication of nutrition intervention is relevant, accurate, timely, comprehensive, and specific
- Documentation of nutrition intervention contains standardized terminology
- Documentation of nutrition intervention is revised and updated

Figure 2. Continued

Standards of Practice for Registered Dietitians in Nephrology Care

Standard 4: Nutrition Monitoring and Evaluation

The RD in nephrology care monitors and evaluates outcome(s) directly related to the nutrition diagnosis and the goals established in the prescribed intervention plan. This will assist in determining if the goals or desired outcomes of nutrition care are being met. Through monitoring and evaluation, the RD uses pertinent outcome indicators (markers) that are relevant to the client-defined needs, nutrition diagnosis, nutrition goals, and integrated disease state management. Progress should be monitored, measured, and evaluated on a timely, planned schedule until discharge. The RD uses data and expertise from this step to create an outcomes management system.

Rationale: Progress should be monitored, measured, and evaluated on a timely, planned schedule. Alterations in outcome indicators such as body weight or quality of life are examples of events that trigger re-evaluation of the nutrition care process. Monitoring specifically refers to the review and measurement of the client's status at a scheduled (preplanned) follow-up consultation. The follow-up should relate to the nutrition diagnosis, intervention plans/goals, and outcomes, whereas evaluation is the systematic comparison of the most current findings with the previous status, intervention goals, or a reference standard.

Indicators for Standard 4: Nutrition Monitoring and Evaluation			The "X" signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Practice			Generalist	Specialty	Advanced
4.1	Monitors progress:		X	X	X
	4.1A	Checks client understanding and adherence with plan	X	X	X
	4.1A1	Ensures client-centered approach, utilizing appropriate behavioral change theories	X	X	X
	4.1B	Determines whether the intervention is being implemented as prescribed	X	X	X
	4.1B1	Modifies intervention as appropriate to address individual client needs	X	X	X
	4.1B2	Arranges for additional resources or more intensive resources to fulfill the nutrition prescription		X	X
	4.1B3	Tailors tools and methods to ensure desired outcome specific to the client's living situation			X
	4.1C	Provides evidence that the plan/intervention strategy is or is not changing client behavior or status	X	X	X
	4.1C1	Uses findings of nutrition-focused physical exam		X	X
	4.1D	Identifies and evaluates positive and/or negative outcomes	X	X	X
	4.1D1	Evaluates intended effects and potential adverse effects related to complex problems and intervention		X	X
	4.1E	Gathers information indicating reasons for lack of progress	X	X	X
	4.1E1	Consults with other HCPs ²		X	X
	4.1E2	Identifies indicators to monitor for potential intervention		X	X
	4.1E3	Critically evaluates subjective responses from client/caregiver/other HCP; uses critical thinking to develop questions that identify stage of behavior change			X
	4.1E4	Identifies complex underlying problems beyond the scope of nutrition that are interfering with the intervention and recommends appropriate intervention			X
	4.1F	Supports conclusions with evidence	X	X	X
	4.1G	Checks intended effects and potential adverse effects of pharmacological and nonpharmacological treatment	X	X	X
	4.1G1	Completes an in-depth analysis of intended effects and potential adverse effects related to complex problems and interventions		X	X

Figure 2. Continued

Indicators for Standard 4: Nutrition Monitoring and Evaluation			The "X" signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Practice			Generalist	Specialty	Advanced
	4.1H	Evaluates patterns, trends, and unintended variation related to problems and interventions		X	X
	4.1H1	Perceives client barriers	X	X	X
4.2	Measures outcomes:		X	X	X
	4.2A	Selects standardized evidence-based outcome indicators that are relevant to the client and directly related to the nutrition diagnosis and the goals established in the intervention plan (ie, direct nutrition outcomes; clinical and health status outcomes; client-centered outcomes; health care utilization)	X	X	X
	4.2A1	Considers co-morbidities as related to CKD (eg, glycemic control, blood pressure, dyslipidemias)	X	X	X
	4.2A2	Considers client-centered (eg, quality of life, functional status, socialization, client satisfaction) outcomes	X	X	X
	4.2A3	Considers clinical and health status/direct nutrition (eg, SGA, ^{aa} MIS, ^{bb} physical well-being; weight and growth patterns; developmental milestones, fluid and electrolyte balance; bone and mineral metabolism; hematological profile; dialysis adequacy, treatment-related side effects) outcomes		X	X
	4.2A4	Considers health care utilization (eg, consistent, adequate delivery of dialysis treatment; infection and hospitalizations; attention to resource utilization)		X	X
	4.2B	Explores client and caregiver perception of success related to the designated outcome indicators		X	X
4.3	Evaluates outcomes:		X	X	X
	4.3A	Uses standardized indicators to compare current findings with previous status, intervention goals, and/or reference standards	X	X	X
	4.3A1	Evaluates client response to individual nutrition plan and progress toward achieving and maintaining goals	X	X	X
	4.3A2	Benchmarks individual client data against national, state, and local public health and population-based data (eg, Healthy People 2010, ESRD Network, ^{cc} USRDS, ^{dd} DOPPS, NAPRTCS ^{ee})		X	X
	4.3A3	Completes a comprehensive analysis of the indicators for each identified problem area using specialty level clinical judgment skills		X	X
	4.3A4	Completes a detailed analysis and trending of the indicators to evaluate the complexity of problems and correlates one problem to another using advanced clinical judgment skills			X
	4.3B	Understands effect of the sum of all interventions on overall client health outcomes	X	X	X
	4.3B1	Evaluates effect of the sum of all interventions on overall client health outcomes		X	X
	4.3B2	Develops action plan based on the effect of the sum of all interventions on overall client health outcomes in complex cases			X
4.4	Documents and communicates:		X	X	X
	4.4A	Date and time, as appropriate to care setting	X	X	X
	4.4B	Specific indicators measured and results	X	X	X

Figure 2. Continued

Indicators for Standard 4: Nutrition Monitoring and Evaluation		The "X" signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Practice		Generalist	Specialty	Advanced
4.4C	Criteria to which the indicator is compared (eg, nutrition prescription/goal or a reference standard)	X	X	X
	4.4C1 Reviews and understands criteria to which the indicator is compared (eg, nutrition prescription/goal or a reference standard)	X	X	X
	4.4C2 Designs interventions to meet and exceed indicator(s)		X	X
	4.4C3 Evaluates indicators and ensures that they optimize client outcomes			X
4.4E	Changes in client level of understanding and nutrition-related behaviors	X	X	X
4.4F	Changes in family situation, caregiver	X	X	X
4.4G	Changes in clinical, health status, or functional outcomes	X	X	X
4.4H	Other positive or negative outcomes	X	X	X
4.4I	Future plans for nutrition care, monitoring, and follow up or discharge	X	X	X

Examples of Outcomes for Standard 4: Nutrition Monitoring and Evaluation for Registered Dietitians in Nephrology Care

- The client outcome(s) directly relate to the nutrition diagnosis and the goals established in the intervention plan. Examples include, but are not limited to:
 - Direct nutrition outcomes (eg, knowledge, behavior, food/nutrient intake changes, and improved nutrition status, improved growth and weight gain, improved tolerance to enteral feedings)
 - Clinical and health status outcomes (eg, laboratory values, body weight, growth, OFC, blood pressure, risk factor profile, signs and symptoms, clinical status, infections, co-morbid conditions, and complications)
 - Client-centered outcomes (eg, quality of life, satisfaction, self-efficacy, self-management, functional status, and ability)
 - Health care utilization and cost outcomes (eg, medications, special procedures, planned/unplanned clinic visits, hospitalizations, frequency and length of stay of hospitalizations, extended care admissions)
 - Documentation and communication of the monitoring and evaluation is relevant, accurate, timely, comprehensive, and specific

^aRD=registered dietitian.

^bADA=American Dietetic Association.

^cCVD=cardiovascular disease.

^dUTI=urinary tract infection.

^eCHF=congestive heart failure.

^fHTN=hypertension.

^gGI=gastrointestinal.

^hOFC=occipitofrontal circumference.

ⁱBMI=body mass index.

^jBW=body weight.

^kCKD=chronic kidney disease.

^lDM=diabetes mellitus.

^mBUN=blood urea nitrogen.

ⁿCO₂=carbon dioxide.

^oeGFR=estimated glomerular filtration rate.

^pUKM=urea kinetic modeling.

^qeKt/V=dose of dialysis treatment; urea clearance (K) times treatment length (t) divided by urea distribution volume (V).

^rADLs=activities of daily living.

^sQOL=quality of life.

^tDOPPS=Dialysis Outcomes and Practice Patterns Study.

^uNHANES=National Health and Nutrition Examination Survey.

^vMNT=medical nutrition therapy.

^wNKF K/DOQI=National Kidney Foundation's Kidney Disease Outcomes Quality Initiative.

^xKDIGO=Kidney Disease: Improving Global Outcomes.

^yIDT=interdisciplinary team.

^zHCPs=health care providers.

^{aa}SGA=subjective global assessment.

^{bb}MIS=malnutrition inflammation syndrome.

^{cc}ESRD Network Data=End Stage Renal Disease Network Data.

^{dd}USRDS=The United States Renal Data System.

^{ee}NAPRTCS=North American Pediatric Renal Trials and Collaborative Studies.

Figure 2. Continued

Standards of Professional Performance for Registered Dietitians in Nephrology Care

Standard 1: Provision of Services

Provides quality service based on client expectations and needs

Rationale: The RD^a in nephrology care provides, facilitates, and promotes quality services based on client needs and expectations, current knowledge, and professional experience.

Indicators for Standard 1: Provision of Services		The "X" signifies the indicator for the level of practice		
Bold Font Indicators are adapted from ADA ^b Core RD Standards of Professional Performance		Generalist	Specialty	Advanced
1.1	Provides input into the development of appropriate nutrition screening parameters to ensure that the screening process elicits the right questions	X	X	X
1.1A	Complies with standards of nephrology care based on evidence-review process	X	X	X
1.1B	Utilizes evidence-based review process to determine screening parameters		X	X
1.1C	Evaluates the effectiveness of nephrology screening tools		X	X
1.1D	Leads team on changes and process revisions as needed		X	X
1.1E	Establishes screening guidelines, indicators, and recommendations relevant to client population			X
1.2	Reviews and participates in collecting data to assess the efficiency and effectiveness of the nutrition screening process	X	X	X
1.2A	Audits nutrition screening processes for efficiency and effectiveness		X	X
1.2B	Develops and implements changes to improve or update the nutrition screening process			X
1.3	Contributes to the development of a referral process to ensure that the public has an identifiable method of being linked to dietetic professionals who will ultimately provide services	X	X	X
1.3A	Evaluates the effectiveness of nephrology referral tools	X	X	X
1.3B	Receives referrals for services from and makes referrals to other health care professionals	X	X	X
1.3C	Leads team on changes to referral tools and process revisions as needed		X	X
1.3D	Directs and manages referral processes and systems			X
1.4	Collaborates with client to assess needs, background, and resources and to establish mutual goals	X	X	X
1.4A	Understands behavior change and counseling theories and is able to apply theories in practice	X	X	X
1.4B	Recognizes the influences that culture, health literacy, and socioeconomic status have on health/illness experiences and the client's use of health care services	X	X	X
1.4C	Adapts practice to meet the needs of an ethnically and culturally diverse population (eg, selecting and using interpreters, conducting appropriate cultural assessments, selecting appropriate levels of cultural interventions, adapting client education/counseling approaches and materials, adapting content teaching modality)	X	X	X
1.4D	Leads in utilizing, evaluating, and communicating success in using different theoretical frameworks for intervention (eg, health belief model; social cognitive theory/social learning theory; stages of change [transtheoretical theory]; Enabling/Access Enhancing [PRECEDE model]; Fishbein/Ajzen [theory of reasoned action])		X	X

Figure 3. Standards of Professional Performance for Registered Dietitians in Nephrology Care.

Indicators for Standard 1: Provision of Services			The "X" signifies the indicator for the level of practice		
			Generalist	Specialty	Advanced
Bold Font Indicators are adapted from ADA^b Core RD Standards of Professional Performance					
	1.4E	Establishes systematic process to identify, track, and update available resources.		X	X
	1.4F	Directs and manages systematic processes to identify, track, and monitor utilization of client resources			X
1.5	Informs and involves clients and their families or caregivers in decision making		X	X	X
	1.5A	Designs nephrology MNT ^c plan according to clients' complex care needs, with consideration of and input from caregivers and other healthcare providers when appropriate		X	X
	1.5B	Guides and teaches clients/support network in health care decision-making and goal-setting to positively maximize interventions and outcome measures			X
1.6	Recognizes clients' cultural beliefs and their concepts of illness		X	X	X
	1.6A	Adapts practice to meet the needs of an ethnically- and culturally-diverse population	X	X	X
	1.6B	Connects clients/support network with established resources and services within the specific ethnic/cultural community		X	X
	1.6C	Searches for additional resources to positively influence health-related decision making within the client's specific ethnic/cultural community, and collaborates as appropriate			X
1.7	Applies knowledge and principles of disease prevention and behavioral change appropriate for diverse populations		X	X	X
1.8	Collaborates and coordinates with other professionals as appropriate		X	X	X
	1.8A	Works within the traditional interdisciplinary team to provide education, services, and/or programs	X	X	X
	1.8B	Reports in partnership with health care provider, clinical microsystem, and referral sources for treatment care services and education	X	X	X
	1.8C	Plans and develops community-based health promotion/prevention programs based on client needs, culture, evidence-based strategies, and available resources; seeks assistance as needed	X	X	X
	1.8C1	Plans and develops larger population-based and specialty focused health promotion/prevention programs based on client needs, culture, evidence-based strategies, and available resources		X	X
	1.8D	Serves in consultant role for medical management of kidney disease and co-morbidities		X	X
	1.8E	Plans, develops, and implements systems of care and services based on the chronic care model		X	X
	1.8F	Directs and manages systematic processes to identify, track, and monitor utilization of client resources			X
1.9	Applies knowledge and skills to determine the most appropriate action plan		X	X	X
	1.9A	Applies general nephrology knowledge and skills	X	X	X
	1.9B	Applies knowledge and skills at the specialty level (ie, functional working knowledge of specialty area demonstrated by an understanding and use of the general principle, theories, and practices pertinent to the nephrology specialty) to determine the most appropriate action plan		X	X
	1.9C	Applies knowledge and skills at the advanced level (ie, advanced and comprehensive knowledge of the nephrology area demonstrated by an understanding and use of advanced principles, theories, and practices of the nephrology specialty) to determine the most appropriate action plan			X

Figure 3. Continued

Indicators for Standard 1: Provision of Services			The "X" signifies the indicator for the level of practice		
Bold Font Indicators are adapted from ADA ^b Core RD Standards of Professional Performance			Generalist	Specialty	Advanced
1.10	Implements quality practice by following an evidence-based approach, policies, procedures, legislation, licensure, credentialing, competency, regulatory requirements, and practice guidelines		X	X	X
	1.10A	Collects and documents national standardized and consensus-based nephrology performance measures (eg, MNT, KDOQI, ^d KDIGO ^e)	X	X	X
	1.10B	Participates as a committee member in the development and updating of policies and procedures, quality improvement, and evidence-based practice tools	X	X	X
	1.10C	Develops implementation strategies for quality improvement tailored to the needs of the organizations and their client populations (eg, identification/adaptation of evidence-based practice guidelines/protocols, skills training/reinforcement, organizational incentives and supports)		X	X
	1.10D	Develops and manages nephrology education programs in compliance with national guidelines and standards (eg, MNT, KDOQI, KDIGO)		X	X
	1.10E	Develops, conducts, and/or participates in the delivery of nephrology specific community/prevention programs incorporating behavior change theory, self-concept, lifestyle functions, and systematic evaluation of learning		X	X
	1.10F	Leads process of monitoring, evaluating, and improving the use of protocols/guidelines/practice tools		X	X
	1.10G	Leads process of developing protocols/guidelines/practice tools			X
1.11	Fosters excellence and exhibits professionalism in practice		X	X	X
	1.11A	Manages change effectively, demonstrating knowledge of the change process	X	X	X
	1.11B	Demonstrates attributes, such as assertiveness, enhanced listening, and conflict resolution skills	X	X	X
	1.11C	Demonstrates knowledge and skill in consensus building		X	X
	1.11D	Participates in regional or national activities related to nephrology nutrition policy and services; seeks opportunities for collaboration		X	X
	1.11E	Takes a leadership role in the development of public policy related to nephrology nutrition services, at a regional or national level. Serves as an expert for nephrology nutrition related issues.			X
1.12	Continuously evaluates processes and outcomes of both nutrition/health quality and service quality dimensions (eg, convenience, dignity, ease of access, privacy, comfort, client involvement in decision-making, and promptness of care)		X	X	X
	1.12A	Utilizes a continuous quality improvement approach to measure performance against desired outcomes	X	X	X
	1.12B	Conducts data analysis, develops report of outcomes and improvement recommendations, and disseminates findings		X	X
	1.12C	Develops tools for analyzing processes and outcomes			X

Figure 3. Continued

Indicators for Standard 1: Provision of Services		The "X" signifies the indicator for the level of practice		
		Generalist	Specialty	Advanced
1.13 Advocates for the provision of food and nutrition services as part of public policy		X	X	X
1.13A	Participates in the process of client advocacy activities	X	X	X
1.13B	Assesses client population for situations where advocacy is needed		X	X
1.13C	Advocates for health promotion at the policy level and promotes health-related public policy by participating in legislative and policy-making activities that influence health services and practices		X	X
1.13D	Takes leadership role and participates in advocacy activities/issues; authors articles and delivers presentations on topic; networks with other interested parties		X	X
1.13E	Takes leadership role and initiates in advocacy activities/issues; authors articles and delivers presentations on topic; networks with other interested parties			X
1.14 Maintains records of service provided		X	X	X
1.14A	Organizes records for retrospective data analysis		X	X
1.14B	Seeks out research efforts and provides data for scientific record processing			X
1.15 Follows nutrition protocols and policies as designated for populations with CKD^f		X	X	X
1.15A	Utilizes evidence-based guidelines, ^g best practices, and national and international guidelines (eg, ADA, NKF, ^h KDOQI, KDIGO) in the delivery of nutrition services	X	X	X
1.15B	Develops nutrition programs, protocols, and policies based on evidence-based guidelines, best practices, trends, and national and international guidelines (eg, ADA, KDOQI, KDIGO)		X	X
1.15C	Directs the development of nutrition programs, protocols, and policies based on evidence-based guidelines, best practices, trends, and national and international guidelines (eg, ADA, KDOQI, KDIGO)			X
1.16 Participates in food/formulary delivery systems in terms of the nutrition status, health, and well-being of populations with kidney disease		X	X	X
1.16A	Participates in foodservice planning and delivery for health care and community settings (eg, hospital, nursing home, senior centers, home delivery)	X	X	X
1.16B	Provides guidance regarding enteral supplements/feedings, TPN, ⁱ and IDPN/IPN ^j in accordance with best practices (eg, ADA, ASPEN, ^k NKF)		X	X
1.16C	Contributes to development of nephrology nutrition practice guidelines			X

<p>Examples of Outcomes for Standard 1: Provision of Services</p> <ul style="list-style-type: none"> ● Clients actively participate in establishing goals and objectives ● Clients' needs are met ● Clients are satisfied with services and products provided ● Evaluation reflects expected outcomes ● Appropriate screening and referral systems are established and implemented ● Public has access to food assistance and nutrition services

Figure 3. Continued

Standards of Professional Performance for Registered Dietitians in Nephrology Care

Standard 2: Application of Research

Effectively applies, participates in, or generates research to enhance practice.

Rationale: The RD in nephrology care effectively applies, supports, and generates dietetics research in practice; encourages continuous quality improvement; and provides documented support for the benefit of the client.

Indicators for Standard 2: Application of Research		The "X" signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Professional Performance		Generalist	Specialty	Advanced
2.1	Locates and reviews best available research findings for their application to dietetics practice	X	X	X
	2.1A Demonstrates understanding of research design and methodology	X	X	X
	2.1B Demonstrates understanding of study outcomes and how to interpret and apply the results to clinical practice		X	X
	2.1C Encourages the use of evidence-based tools as a basis for stimulating awareness and integration of current evidence		X	X
	2.1D Functions as a co-author or co-investigator of research and organizational position papers		X	X
	2.1E Identifies key clinical and management questions and utilizes systematic methods to extract evidence-based research to answer questions			X
	2.1F Functions as a primary or senior author of research and organizational position papers			X
2.2	Bases practice on sound scientific principles, best available research, and theory	X	X	X
	2.2A Demonstrates adherence to evidence-based practice at the specialty level (eg, considering the best available research on nutrition related management of kidney disease complication) in an effort to reduce inappropriate variation in practice patterns		X	X
	2.2B Demonstrates adherence to evidence-based practice at the advanced practice level (ie, considering the best available research reflecting the focus of kidney disease as a complex disease state)			X
	2.2C Critically evaluates the best available research reflecting complex disease processes, and efficiently applies this research to clinical practice			X
2.3	Integrates best available research with clinical/managerial expertise and client values (evidence-based practice)	X	X	X
	2.3A Accesses commonly used sources of evidence in identifying applicable courses of action in client care	X	X	X
	2.3B Identifies and develops evidence-based policies and procedures and clinical pathways as a basis for nephrology nutrition practice		X	X
	2.3C Participates in research activities related to nephrology nutrition (e.g., data collection and/or analysis, research design, publication)		X	X
	2.3D Designs and conducts research in nephrology nutrition			X

Figure 3. Continued

Indicators for Standard 2: Application of Research		The “X” signifies the indicators for the level of practice		
		Generalist	Specialty	Advanced
Bold Font Indicators are adapted from ADA Core RD Standards of Professional Performance				
2.4	Promotes research through alliances and collaboration with dietetics and other professionals and organizations	X	X	X
	2.4A Identifies research issues/questions		X	X
	2.4B Collaborates with interdisciplinary and/or inter-organizational team to perform and disseminate nephrology nutrition research		X	X
	2.4C Leads interdisciplinary and/or inter-organizational research activities efforts related to nephrology nutrition			X
2.5	Contributes to the development of new knowledge and research in dietetics	X	X	X
	2.5A Participates in practice-based research networks (ie, ADA’s DPBRN ¹ ; NKF–Council on Renal Nutrition National Research Questions)		X	X
	2.5B Identifies and initiates research relevant to nephrology practice as the primary investigator or as a collaborator with other members of the health care team or community		X	X
	2.5C Serves as a primary or senior investigator in collaborative research teams that examines relationships related to nutrition and chronic kidney disease			X
2.6	Collects measurable data and documents outcomes within the practice setting	X	X	X
	2.6A Develops or utilizes systematic processes to collect and analyze the data		X	X
	2.6B Monitors and evaluates pooled/aggregate data against expected outcomes		X	X
	2.6C Translates research findings for incorporation into the development of policies, procedures, and guidelines for nephrology dietetics practice at national and international levels			X
	2.6D Directs integration of research data into publications and presentations			X
2.7	Communicates research data and activities through various media	X	X	X
	2.7A Presents evidence-based nephrology research at the local level (eg, community groups, colleagues)	X	X	X
	2.7B Presents at local, regional, and national meetings and authors articles in peer-reviewed nephrology-related publications		X	X
	2.7C Serves in a leadership role for nephrology-related publications and program planning of national meetings		X	X
	2.7D Translates research findings in the development of policies, procedures, and guidelines for care		X	X
	2.7E Serves in a leadership role for program planning of local, state, national, and international research-oriented meetings and related publications			X

Examples of Outcomes for Standard 2: Application of Research
<ul style="list-style-type: none"> ● Client receives appropriate services based on the effective clinical application of research ● A foundation for performance measurement and improvement is provided ● Outcomes data supports reimbursement for the services of the RD in nephrology care ● Best available research findings are used for the development and revision of practice tools and resources ● Benchmarking and knowledge of “best practices” is used to improve performance ● RDs publish peer-reviewed articles and present posters at scientific meetings ● RDs develop client materials that reflect current principles of evidence-based MNT

Figure 3. Continued

Standards of Professional Performance for Registered Dietitians in Nephrology Care

Standard 3: Communication and Application of Knowledge

Effectively applies knowledge and communicates with others

Rationale: The RD in nephrology care works in collaboration with others while using his or her unique knowledge of and expertise in metabolism, food, human nutrition, and management information skills in providing services.

Indicators for Standard 3: Communication and Application of Knowledge		The "X" signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Professional Performance		Generalist	Specialty	Advanced
3.1	Exhibits knowledge related to a specific area(s) of professional service	X	X	X
	3.1A Identifies relevant nephrology care, nutrition, and education publications	X	X	X
	3.1B Contributes to the body of knowledge for the profession (eg, research, presentation, publication)	X	X	X
	3.1C Interprets regulatory, accreditation, and reimbursement programs and standards for institutions and providers that are specific to nephrology care and education (eg, CMS, ^m The Joint Commission, MNT)		X	X
	3.1D Evaluates nephrology related public health trends and epidemiological reports related to kidney disease prevention and treatment (eg, USRDS, ⁿ Healthy People 2010, SRTR ^o)		X	X
	3.1E Interprets public health trends and epidemiological data and applies to professional practice/organization		X	X
	3.1F Reviews ongoing research in kidney disease and nutrition including nephrology care, education, and preventing/delaying progression of disease		X	X
	3.1G Acts as an expert for other health care providers, the community, and outside agencies, related to nephrology nutrition			X
3.2	Communicates sound scientific principles, research, and theoretical concepts	X	X	X
	3.2A Demonstrates critical thinking and problem-solving skills at the specialty level (eg, local review and application of evidence-based guidelines) when communicating information		X	X
	3.2B Demonstrates critical thinking and problem solving skills at the advanced practice level (eg, able to convey more than mere procedural understanding) when communicating information			X
3.3	Selects appropriate information and best method or format for presenting in writing or verbally when communicating information	X	X	X
3.4	Utilizes knowledge of food, human nutrition, and metabolism with knowledge of health, social sciences, communication, and management theory	X	X	X
	3.4A Applies new knowledge of nephrology care	X	X	X
	3.4B Integrates new knowledge of nephrology care at the specialty level (eg, in new and varied contexts)		X	X
	3.4C Integrates new knowledge of nephrology care in new and varied contexts at the advanced practice level (eg, for the most complex and exceptional problems)			X

Figure 3. Continued

Indicators for Standard 3: Communication and Application of Knowledge		The "X" signifies the indicators for the level of practice		
		Generalist	Specialty	Advanced
3.5 Shares knowledge and information with clients and health care professionals		X	X	X
3.5A	Authors articles for consumers and other health care providers		X	X
3.5B	Serves as invited reviewer, author, and presenter at local and regional meetings and media outlets		X	X
3.5C	Serves as invited reviewer, author, and presenter at national and international meetings and media outlets		X	X
3.5D	Participates on program planning committees and review of journal manuscripts		X	X
3.5E	Serves in leadership role for publications (ie, editorial review board) and on program planning committees		X	X
3.5F	Functions as a content expert or KOL ^P			X
3.6 Assists and facilitates students and peers with application of knowledge and skills		X	X	X
3.6A	Participates as a mentor or preceptor to health care providers within or outside of profession		X	X
3.6B	Contributes to the educational and professional development of dietitians, students, and health care professionals in other fields, through formal and informal teaching activities, preceptorship, and mentorship		X	X
3.6C	Develops mentor and preceptorship programs that promote nephrology care and education			X
3.6D	Fulfills teaching or faculty role for education programs for physicians and other health care professionals in pursuit of nutrition-related fellowships, training, and/or certification			X
3.7	Documents interpretation of relevant information and results of communication with professionals, personnel, students, or clients	X	X	X
3.7A	Builds and maintains relationships between researchers and decision makers to facilitate effective knowledge transfer		X	X
3.7B	Provides analysis and commentary of relevant information			X
3.8 Contributes to the development of new knowledge		X	X	X
3.8A	Serves on planning committees/task forces to develop continuing education programs	X	X	X
3.8B	Serves as consultant to business, industry, and national nephrology organizations regarding continuing education needs of consumers and health care providers		X	X
3.8C	Uses clinical exemplars to generate new knowledge and develop new guidelines, programs, and policies in the advanced nephrology practice area			X
3.9	Seeks out current and relevant information to provide effective services	X	X	X
3.9A	Presents information to establish collaborative practice at a systems level (eg, a disease management program)		X	X
3.9B	Establishes privileging at systems level based on demonstrated competency at advanced practice level			X

Figure 3. Continued

Indicators for Standard 3: Communication and Application of Knowledge		The “X” signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Professional Performance		Generalist	Specialty	Advanced
3.10	Communicate, manage knowledge, and support decision making using information technology	X	X	X
3.10A	Utilizes and/or participates in the development/revision of electronic health records within the work site	X	X	X
3.10B	Uses local and national registers (eg, UNOS, ^q ESRD Network Data, ^r USRDS, DOPPS, ^s SRTR, corporate data base when appropriate)		X	X
3.10C	Identifies and/or develops Web-based nephrology nutrition tools		X	X
3.10D	Identifies pertinent nutrition-related clinical trial information (eg, NIDDK, ^t DOPPS)		X	X
3.10E	Contributes nutrition-related expertise to national nephrology-related bioinformatics/medical informatics projects as needed			X
3.11	Contributes to the interdisciplinary approach by promoting food and nutrition strategies that influence health and quality of life outcomes of target populations	X	X	X
3.11A	Consults with physicians and other nephrology health professionals on clinical and other health-related issues	X	X	X
3.11B	Communicates with the interdisciplinary team regarding nutritional strategies to provide evidence-based guidelines and to optimize outcomes		X	X
3.11C	Participates in interdisciplinary collaborations at a systems level (eg, incorporating nephrology nutrition within programs aimed at optimizing outcomes)		X	X
3.11D	Contributes nutrition-related expertise to national projects and professional organizations as needed (eg, NKF, ADA, KDOQI, KDIGO)			X
3.11E	Negotiates and/or establishes privileges at a systems level for new advances in practice			X
3.12	Establishes credibility as a resource within the interdisciplinary health care and management team	X	X	X
3.12A	Educates members of interdisciplinary teams regarding the specialized knowledge and skills of the nephrology dietitian and the CSR ^l		X	X
3.12B	Identified as an expert/resource of scientific information in nephrology nutrition and/or related field by colleagues and/or medical community			X

Examples of Outcomes for Standard 3: Communication and Application of Knowledge

- Professional provides expertise in food, metabolism, human nutrition, and management information
- Client or professional understands the information received and how to apply this knowledge
- Client or professional receives current and appropriate information and verbalizes basic knowledge
- Client or professional knows how to obtain additional guidance

Figure 3. Continued

Standards of Professional Performance for Registered Dietitians in Nephrology Care

Standard 4: Utilization and Management of Resources

Uses resources effectively and efficiently in practice.

Rationale: The RD in nephrology care appropriately uses time, money, facilities, and human resources to optimize and facilitate delivery of quality services.

Indicators for Standard 4: Utilization and Management of Resources		The "X" signifies the indicators for the level of practice		
		Generalist	Specialty	Advanced
Bold Font Indicators are adapted from ADA Core RD Standards of Professional Performance				
4.1	Uses a systematic approach to maintain and manage professional resources successfully	X	X	X
4.2	Uses measurable resources such as personnel, monies, equipment, guidelines, guides for practice, protocols, reference materials, and time in the provision of dietetics services	X	X	X
4.2A	Participates in operational planning of nephrology programs (ie, business planning)	X	X	X
4.2B	Manages and ensures effective delivery of nephrology programs (ie, business planning)		X	X
4.2C	Leads and facilitates business and strategic planning			X
4.3	Analyzes safety, effectiveness, and cost in planning and delivering services and products	X	X	X
4.3A	Analyzes at the systems level; safety, effectiveness, cost in planning and delivering services and products		X	X
4.3B	Advocates for staffing that supports client population and census		X	X
4.3C	Designs, promotes, and seeks executive commitment to a new service that will meet corporate goals			X
4.3D	Leads development of appropriate products and services to meet unmet needs			X
4.4	Justifies use of resources by documenting consistency with plan, continuous quality improvement, and desired outcomes	X	X	X
4.4A	Proactively and systematically recognizes needs, anticipates outcomes and consequences of various approaches, and modifies plan as necessary to achieve desired outcomes		X	X
4.4B	Impacts long-term planning and forecasting; anticipates needs; fully understands strategic plans and integrates justification for changes into plans			X

Figure 3. Continued

Indicators for Standard 4: Utilization and Management of Resources		The “X” signifies the indicators for the level of practice		
		Generalist	Specialty	Advanced
4.5 Educates and helps clients and others to identify and secure appropriate and available resources and services		X	X	X
4.5A	Participates in programs that employ a sound business model and ensure goal-oriented outcomes (eg, CKD prevention/delay in progression, nephrology education, and MNT services)	X	X	X
4.5B	Establishes programs that employ a sound business model and ensure goal-oriented outcomes (eg, CKD prevention/delay in progression, nephrology education, and MNT services)		X	X
4.5C	Exercises leadership to achieve desired outcomes using influence gained through advanced competence to identify and secure appropriate and available resources and services			X
4.6	Actively promotes the inclusion of nephrology education and MNT service components in local, regional, and/or national CKD data registries (ie, NIDDK, SRTR, USRDS, DOPPS)	X	X	X
4.6A	Assures that data on RD service providers are captured in databases	X	X	X
4.6B	Analyzes and utilizes information for long-range strategic planning (eg, program and service efficacy)			X

Examples of Outcomes for Standard 4: Utilization and Management of Resources

- The RD documents use of resources according to plan and budget
- Resources and services are measured and data are used to promote and validate the effectiveness of services
- Desired outcomes are achieved and documented
- Resources are managed and used cost-effectively

Figure 3. Continued

Standards of Professional Performance for Registered Dietitians in Nephrology Care

Standard 5: Quality in Practice

Systematically evaluates the quality and effectiveness of practice and revises practice as needed to incorporate the results of evaluation.

Rationale: The RD in nephrology care regularly evaluates performance and continuously improves services.

Indicators for Standard 5: Quality in Practice		The "X" signifies the indicators for the level of practice		
		Generalist	Specialty	Advanced
5.1 Knows, understands, and complies with federal, state, and local laws and regulations (eg, CMS Conditions for Coverage, The Joint Commission)		X	X	X
5.1A	Complies with HIPAA ^y regulations and standards	X	X	X
5.1B	Interacts with policy makers to contribute and influence nephrology nutrition issues		X	X
5.1C	Acts as an expert to law and policy makers for nephrology nutrition issues			X
5.1D	Works to introduce policy/law to benefit population with kidney disease			X
5.2 Understands pertinent national quality and safety initiatives (eg, NIH,^w KDIGO, KDOQI, Healthy People 2020)		X	X	X
5.2A	Active in hospital/agency/institution quality issues and identifying change for nephrology nutrition concerns		X	X
5.2B	Anticipates changes to local, state, and national quality initiatives, and leads efforts to support nephrology nutrition and related services			X
5.3 Defines/Identifies performance improvement criteria to monitor effectiveness and efficiency of services		X	X	X
5.3A	Participates in and/or uses collected data as part of a quality improvement process relative to outcomes, quality of care, and services rendered	X	X	X
5.3B	Advocates for and participates in developing clinical, operational, and financial databases upon which outcomes in nephrology nutrition care can be derived, reported, and used for improvement		X	X
5.3C	Directs the development, monitoring, and evaluation of practice-specific benchmarks (eg, bone management strategies) relevant to national initiatives (eg, KDOQI, KDIGO, IPRO, ^x Healthy People 2020) and to impact program planning and development			X
5.4 Understands and routinely measures quality of food and nutrition services in terms of structure, process, and outcomes		X	X	X
5.4A	Participates in the development and implementation of policies and procedures for providing food services and monitoring clients receiving nephrology nutrition services	X	X	X
5.4B	Reviews, selects, and implements standardized protocols for nephrology nutrition services		X	X
5.4C	Develops and evaluates standardized protocols for nephrology nutrition services			X

Figure 3. Continued

Indicators for Standard 5: Quality in Practice		The "X" signifies the indicators for the level of practice		
		Generalist	Specialty	Advanced
5.5 Identifies performance improvement criteria to monitor effectiveness of services		X	X	X
5.6 Designs and tests interventions to change processes and systems of nutrition care and foodservice with the objective of improving overall quality		X	X	X
5.7 Identifies potential errors and hazards in nutrition care and foodservice systems		X	X	X
5.7A	Evaluates and ensures safe nutrition care delivery	X	X	X
5.7B	Maintains awareness of problematic product names and error prevention recommendations provided by ISMP ^y (www.ismp.org), FDA ^z (www.fda.gov), and USP ^{aa} (www.usp.org)	X	X	X
5.7C	Recognizes potential drug–nutrient interactions and potential interactions between prescribed treatments and complementary/alternative medicine	X	X	X
5.7D	Develops safety alert systems to monitor key indicators of medical conditions for nephrology clients (eg, starfruit, diabetes medications)		X	X
5.8 Recognizes and implements basic safety design principles, such as standardization and simplification		X	X	X
5.8A	Consistently provides care using the ADA standardized Nutrition Care Process and Model and nationally developed evidence-based nutrition guidelines/guides for clinical practice	X	X	X
5.8B	Implements standardized protocol for education, prevention, treatment, and evaluation of treatment-related side effects with nutrition implications. Works with other disciplines to assure integrated interdisciplinary care is in compliance with recognized standards		X	X
5.8C	Evaluates standardized protocols for education, prevention, and treatment of treatment-related side effects with nutrition implications. Assure that current nutrition standards of care are integrated with other aspects of care			X
5.9 Identifies expected outcomes of nutrition services provided		X	X	X
5.10 Documents outcomes of nutrition services provided		X	X	X
5.11 Compares actual performance to expected outcomes		X	X	X
5.11A	Compares individual performance to self-directed goals and expected outcomes	X	X	X
5.11B	Compares departmental/organizational performance to goals and expected outcomes		X	X
5.11C	Benchmarks departmental/organizational performance with national programs and standards			X

Figure 3. Continued

Indicators for Standard 5: Quality in Practice		The "X" signifies the indicators for the level of practice		
		Generalist	Specialty	Advanced
Bold Font Indicators are adapted from ADA Core RD Standards of Professional Performance				
5.12	Documents action taken when discrepancies exist between current performance and expected outcomes	X	X	X
5.13	Continuously evaluates and refines nutrition services based on measured outcomes	X	X	X
5.13A	Systematically improves the processes of nutrition care and foodservices to improve outcomes reflecting understanding of discrepancies		X	X
5.13B	Leads in creating and evaluating systems, processes, and programs that support institutional and nephrology nutrition-related core values and objectives			X
5.14	Implements an outcomes management system to evaluate the effectiveness and efficiency of practice	X	X	X
5.14A	Evaluates collected data as part of a quality improvement process to improve outcomes and quality of care and services rendered in the future		X	X
5.14B	Serves in leadership role to assess benchmarks of community/prevention programs compared to public health and nephrology based indicators to positively impact program planning and development (eg, Healthy People 2010 Leading Health Indicators and national nephrology quality improvement measure sets)		X	X
5.14C	Advocates for and participates in the development of clinical, operational, and financial databases from which nephrology nutrition care related outcomes can be derived, reported, and used for improvement			X

<p>Examples of Outcomes for Standard 5: Quality in Practice</p> <ul style="list-style-type: none"> ● Performance improvement criteria are measured and compared ● Actual performance is assessed and evaluated ● Aggregate of outcomes data compared to established criteria (objectives/goals) ● Results of quality improvement activities direct refinement of practice
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Figure 3. Continued

Standards of Professional Performance for Registered Dietitians in Nephrology Care

Standard 6: Competency and Accountability

Engages in lifelong self-development to improve knowledge and enhance professional competence.

Rationale: The RD in nephrology care engages in professional practice requiring continuous acquisition of knowledge and skill development to maintain competence and accountability to the client and public.

Indicators for Standard 6: Competency and Accountability		The "X" signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Professional Performance		Generalist	Specialty	Advanced
6.1	Conducts self-assessment at regular intervals to identify professional strengths and weaknesses	X	X	X
6.1A	Evaluates current practice at the individual and systems levels in relation to current research findings at the specialty practice level		X	X
6.1B	Evaluates current practice at the individual and systems levels in relation to current research findings at the advanced practice level			X
6.2	Identifies needs for professional development and mentors others	X	X	X
6.2A	Seeks opportunities at the specialty practice level to develop mentor/protégé programs with peers and health professionals of other disciplines		X	X
6.2B	Seeks opportunities at the advanced practice level to develop mentor/protégé programs with peers and health professionals of other disciplines			X
6.3	Participates in peer review	X	X	X
6.3A	Participates in peer evaluation, including but not limited to peer supervision, clinical chart review, professional practice, and performance evaluations, as applicable	X	X	X
6.3B	Participates in scholarly review including but not limited to professional articles, chapters, books	X	X	X
6.3C	Serves as reviewer or editorial board associate for professional organizations, journals, and books		X	X
6.3D	Leads an editorial board for scholarly review including but not limited to professional articles, chapters, books			X
6.4	Mentors Others	X	X	X
6.4A	Participates in mentoring entry level and generalist dietetics professionals	X	X	X
6.4B	Develops mentoring or internship opportunities for dietetics professionals and mentoring opportunities for nephrology and health care professionals, as appropriate		X	X
6.4C	Functions as nephrology nutrition preceptor for RDs and dietetic interns		X	X
6.4D	Functions as nephrology nutrition preceptor for aspiring specialty level RDs			X
6.4E	Directs and guides the professional development through implementation of supervised practices in nephrology care and mentoring programs			X
6.5	Develops and implements a plan for professional growth	X	X	X
6.5A	Seeks opportunities to participate in nephrology continuing education locally, regionally, and nationally	X	X	X
6.5B	Develops and implements a continuing education plan for specialty practice		X	X
6.5C	Develops and implements a continuing education plan for advanced practice			X

Figure 3. Continued

Indicators for Standard 6: Competency and Accountability		The "X" signifies the indicators for the level of practice		
		Generalist	Specialty	Advanced
6.6 Documents professional development activities		X	X	X
6.6A	Documents in professional development portfolio examples of nephrology care that demonstrate the expanded professional responsibility in a specialty practice role		X	X
6.6B	Documents in professional development portfolio examples of nephrology care that describe and demonstrate the expanded professional experience in an advanced practice role			X
6.7	Adheres to the Code of Ethics for the profession of dietetics and is accountable and responsible for actions and behavior	X	X	X
6.8	Assumes responsibility for actions and behaviors	X	X	X
6.8A	Ensures actions and behaviors of staff are accountable to policies as applicable to a management role		X	X
6.8B	Strives for an improvement in practice with self and others; is active in promoting the specialty of nephrology nutrition		X	X
6.8C	Leads by example; exemplifies professional integrity as a leader of nephrology nutrition		X	X
6.8D	Directs and develops policies that ensure accountability as applicable to a management role			X
6.9	Integrates the ADA Standards of Practice (SOP) and Standards of Professional Performance (SOPP) into self-assessment and development	X	X	X
6.9A	Utilizes the ADA Standards to assess performance at the appropriate level of practice	X	X	X
6.9B	Utilizes the ADA Standards to develop and implement a professional development plan to enhance practice and performance	X	X	X
6.9C	Utilizes the ADA Standards to develop and implement a professional development plan to advance practice and performance to a higher level		X	X
6.9D	Develops corporate/institutional policy, guidelines, human resource material (eg, career ladders, acceptable performance level) using ADA SOP/SOPP as guides as applicable to a management role		X	X
6.9E	Defines specific action for levels of practice within SOP/SOPP to demark areas of performance (generalist, specialist, or advanced practice)			X
6.10	Supports the application of research findings and best available evidence to professional practice	X	X	X
6.10A	Recognizes and utilizes major nephrology care and education publications	X	X	X
6.10B	Serves as an author of nephrology related publications for consumer and/or health care provider audiences on nephrology topics		X	X
6.10C	Serves as a presenter for consumer and/or health care provider audiences on nephrology topics		X	X
6.10D	Uses planned change principles to integrate research and practice			X

Figure 3. Continued

Indicators for Standard 6: Competency and Accountability		The “X” signifies the indicators for the level of practice		
Bold Font Indicators are adapted from ADA Core RD Standards of Professional Performance		Generalist	Specialty	Advanced
6.11	Attains and maintains professional licensure/certifications in accordance with federal, state, and local laws and regulations	X	X	X
6.11A	Attains and maintains state licensure/certification as appropriate to practice setting	X	X	X
6.11B	Obtains and maintains specialty certification (ie, renal nutrition [CSR], diabetes [CDE])		X	X
6.11C	Develops programs, tools, and resources in support of assisting RDs obtain specialty certification in nephrology nutrition			X
6.12	Takes active leadership roles commensurate with experience	X	X	X
6.12A	Utilizes good communication skills and collaborates with other health professionals	X	X	X
6.12B	Serves on local nephrology planning committees/task forces for health professionals and industry	X	X	X
6.12C	Serves on regional and national nephrology planning committee task force for health professionals and industry		X	X
6.12D	Proactively seeks opportunities at the local, regional, national, and international level to demonstrate the integration of national standards/guidelines established by related nephrology organizations into their respective clinical practices and programs		X	X
6.12E	Develops innovative approaches to complex clinical practice issues			X
6.12F	Recruited for leadership development, positions, and identified as expert related to nephrology nutrition issues			X
6.12G	Identifies new opportunities for leadership, crosses discipline boundaries to promote dietetic practice in a broader context			X

Examples of Outcomes for Standard 6: Competency and Accountability

- Self-assessments are completed routinely
- Development needs are identified and directed learning strategies are implemented
- Practice outcomes demonstrate adherence to the Code of Ethics, SOP, and SOPP
- Practice decisions reflect best available evidence
- Obtains appropriate certifications
- Meets Commission on Dietetic Registration recertification requirements
- Serves as leader and participates in nephrology committees and task forces

^aRD=registered dietitian. ^bADA=American Dietetic Association. ^cMNT=medical nutrition therapy. ^dKDOQI=Kidney Disease Outcomes Quality Initiative. ^eKDIGO=Kidney Disease: Improving Global Outcomes. ^fCKD=chronic kidney disease. ^gEvidence-based guidelines=National Committee for Quality Assurance (NCQA). QI9: Clinical Practice Guidelines, Element A: Evidence-based guidelines. 2009 Standards and Guidelines for Accreditation of Health Plans. Washington, DC. ^hNKF=National Kidney Foundation. ⁱTPN=total parenteral nutrition. ^jIDPN/IPN=intradialytic parenteral nutrition/intraperitoneal nutrition. ^kASPEN=American Society for Parenteral and Enteral Nutrition. ^lDPBRN=Dietetics Practice Based Research Network. ^mCMS=Centers for Medicare and Medicaid Services. ⁿUSRDS=The United States Renal Data System. ^oSRTR=Scientific Registry of Transplant Recipients. ^pKOL=key opinion leader. ^qUNOS=United Network for Organ Sharing. ^rESRD Network Data=End Stage Renal Disease Network Data. ^sDOPPS=Dialysis Outcomes and Practice Patterns Study. ^tNIDDK=National Institute of Diabetes, Digestive and Kidney Diseases. ^uCSR=Board Certified Specialist in Renal Nutrition. ^vHIPAA=Health Insurance Portability and Accountability Act. ^wNIH=National Institutes of Health. ^xIPRO=<http://providers.ipro.org/index>. ^yISMP=The Institute for Safe Medication Practices (www.ismp.org). ^zFDA=Food and Drug Administration (www.fda.gov). ^{aa}USP=United States Pharmacopeia (www.usp.org). ^{bb}CDE=certified diabetes educator.

Figure 3. Continued