The Commission on Dietetic Registration: Ahead of the Trends for a Competent 21st Century Workforce

Editor's Note: This is the eighth article in the Academy's Modern History series covering 1990-present. This series as well as other history articles are available in the Academy History collection at www.andjrnl.org/content/amh.

THE ACADEMY OF NUTRITION and Dietetics* has always promoted the quality of education, experience, and lifelong learning as a requisite for membership and later translated to the dietetics credentialing. As early as 1919, just 2 years after the organization began, the leadership was discussing concerns about education and practice performance. To quote Lenna Frances Cooper, first vice president, "There is a need to distinguish between dietitians with a college degree and special training in some scientific work with the ones of lesser training. This would provide an incentive for better preparation and performance" (R. Yakel, RD, unpublished data, 1987). Numerous citations from the early years until today show that the development of the current credentialing program administered by the Commission on Dietetic Registration (CDR) continues the high standards of the Academy's founders.[1] The Academy continues today to be known as a leader among professional organizations in the development and continued strengthening of its credentialing programs.

Beginning in 1961, the House of Delegates (HOD) recommended that the Executive Board appoint a committee to study licensure, registration, and certification with a charge to review their definitions,† the pros and cons of each, and implications these would have to the total Academy membership.[2]

The committee, chaired by Ethel Downey, member of the Executive Board, presented their recommendations in 1967 indicating that voluntary registration of members would be the best path to meet the objectives (ie, education for excellence), not only in the primary development of dietitians, but also for the continuing competency of all dietetics practitioners.[3]

The entire membership was surveyed with an overwhelming positive response and approval of the principle of professional registration. Within a year the committee prepared the first Tentative Proposal on Registration, which was reviewed by the HOD and the Executive Board and sent to the membership for vote as an amendment to the Academy's constitution. The amendment was approved by a tremendous positive response by the members to become effective June 1, 1969.[4]

During the first 5 years, the Committee on Professional Registration was dedicated to getting the initial "grandfather group" (for whom the test was waived) processed, defining and approving continuing education events, developing the exam (assisted by the Psychological Corporation of New York City),[5] and devising the appeals process for denial and revocation of registration. Thus, began a successful credentialing program, which continues today to be at the forefront of professional competence and practice. Over the years there has been much progress, as discussed in the rest of this paper, but overall the original purpose of registration has remained steadfast: "upgrading professional competency by evidence of self-improvement through continuing education and maintenance of high standards of performance by individuals practicing in the profession of dietetics, thereby protecting the health, safety and welfare of the public."[2] An administratively autonomous credentialing body (Figure 1), the CDR maintains a separate budget and governing body of nationally elected registered dietitians (RDs); dietetics technicians, registered (DTRs); and public members. Although the Academy owns the CDR credentials, the Academy Bylaws provide CDR with "sole and independent authority" in setting standards, establishing fees, and finance and administration of activities related to certification, all in the interest of protecting the public.

Relative to the history of the Academy of Nutrition and Dietetics, CDR is a fairly new entity. Created in 1969 as a voluntary registration managed by the Committee on Professional Registration, registration was separated from Academy membership in 1976 when the CDR replaced the Committee on Professional Registration.[1] Throughout those early years, the focus was on the quality of education, defining continuing education requirements, drafting the requirements for registration, developing an exam and recertification requirements, and certifying the 19,457 Academy Active members for

*Until January 2012, the Academy was known was the American Dietetic Association; throughout this document, it will be called the Academy.

†*The terms "registration" and "certification" are used interchangeably throughout the article.*

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1991-1992	Deborah Canter, PhD, RD, LD
1992-1993	Kristin Biskeborn, MPH, RD
1993-1994	Polly A. Fitz, MA, RD, CDN
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1996-1997	Erskine Smith, PhD, RD
1997-1998	Colleen C. Matthys, RD
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2001-2002	Rachel K. Johnson, PhD, MPH, RD
2002-2003	Isabel Parraga, PhD, RD, LD
2003-2004	Constance J. Geiger, PhD, RD, CD
2004-2005	Cheryl A. Bittle, PhD, RD, LD
2005-2006	Joyce Ann Gilbert, PhD, RD, LD
2006-2007	Jody L. Vogelzang, PhD, RD, LD, FADA
2007-2008	Doris Derelian, PhD, JD, RD, FADA
2008-2009	Robyn L. Wong, MPH, RD, CSP
2009-2010	Penny E. McConnell, MS, RD, SNS
2010-2011	Riva Touger-Decker, PhD, RD, FADA
2011-2012	Barbara L. Grant, MS, RD, CSO
2012-2013	Annalynn Skipper, PhD, RD, FADA
2013-2014	Nancy H. Wooldridge, MS, RDN, LD
2014-2015	Kathryn K. Hamilton, MA, RDN, CSO, CDN, FAND
2015-2016	Kevin L. Sauer, PhD, RDN, LD
2016-2017	Kevin L. Sauer, PhD, RDN, LD

Figure 1. List of chairs of the Commission on Dietetic Registration from 1990 to 2016. The Commission has 12 members: 10 who are registered dietitian nutritionists (one of whom is newly credentialed, one of whom is a Board Certified Specialist, and one of whom is an RDN-AP [Registered Dietitian Nutritionist, Advanced Practice in Clinical Nutrition]); one nutrition and dietetics technician, registered; and one public representative.

whom the examination requirement was waived.[1] Strengthening the registration examination and recertification system, creation of the DTR credential (initiated in 1981 and realized in 1986), and a study of the potential for launching specialist certification dominated the years that followed.[1,6]

As strategic governance in the 1990s transformed the Academy's gaze from inward on internal processes to outward on consumer and legislative concerns,[7] so too was CDR crafting its own strategic plans to shift its focus on market demands of the time. Internally, the increased attention then on health care reform in the United States led to the emergence of notable trends in credentialing—for example, specialization, a move to paperless systems, and modifying requirements to evaluate competency[8]—and it was no easy feat to stay on top of all these new developments.

Externally, strengthening brand recognition of the RD and DTR credentials has been a long-term work in progress within the profession. In the view of the 6,381 individuals who responded to the 2012 Needs Satisfaction Survey,[9] consistent with the results of the 2008 Needs Assessment survey,[10] employment and consumer market concerns that had loomed and waned since the mid-1990s were among the most critical issues affecting the profession. In the decades that followed, these concerns have not diminished; an HOD background paper to detail the 2011 Future Connections Summit on Dietetic Practice, Credentialing, and Education noted the common, and persistent, perception among practitioners that marketplace recognition of RD and DTR credentials was lacking, competition from noncredentialed professionals was a concern, and reimbursement and compensation were perceived as less than ideal. CDR's decision in 2013 to move the degree requirement for eligibility to take the entry-level registration examination for dietitians from a baccalaureate degree to a graduate degree and the establishment of expanded advanced practice roles will assist in enhancing public protection, practitioner competence, credibility, and compensation.

CDR has met every impetus for change and each challenge head-on. CDR was one of the first credentialing agencies to implement computer-based testing in 1999. This innovative assessment system provided CDR registration candidates with many benefits, including year-round testing and immediate score reporting. Both of these features facilitated employment of nutrition and dietetics practitioners soon after graduation.

When the Institute of Medicine (IOM) compelled health professions to emphasize quality and competence, CDR voluntarily launched the innovative Professional Development Portfolio recertification system in 2001 to address this charge.

CDR underwrote several studies to examine dietetics practice, workforce demand, employer perceptions of dietetics practice, compensation, practice competencies, and an extensive array of continuing education programs to equip practitioners with the tools to compete. In addition, CDR provided full or partial funding for a

The Commission on Dietetic Registration (CDR) celebrates its 25th anniversary at the 1995 Food & Nutrition Conference & Expo at the Chicago Sheraton Hotel. Left to right: Richard Baer (CDR public member); Bill Barkley, MBA, RD, LD; Michele Fairchild, MA, RD, FADA; Joan Hudiburg, MS, RD; Cynthia Lewis, MS, RD; Beth Leonberg, MS, MA, RD, CS, CNSD; Polly Fitz, MA, RD; Margaret Garner, MS, RD, LD; Erskine Smith, PhD, RD; Wanda Hain Howell, PhD, RD, CNSD; Josephine Klein, DTR.

myriad of other initiatives including a nutrition-focused physical assessment training video, RD branding, needs assessment studies, simulation development, leadership grants, grassroots marketing grants, advanced practice residency programs, doctoral scholarships, diversity scholarships, medical nutrition therapy outcomes research, and the Outcomes Database Registry.

Thus, from the end of the 20th century and continuing to this day, the work of CDR has certainly positioned the profession for realizing its vision, namely, that "Nutrition and Dietetics credentialing protects and improves the health of the public and supports practitioner competence, quality practice, lifelong learning and career advancement."[11]

A BASELINE FOR COMPETENCE: CREDENTIALING

Monitoring the standards of professional competence and practice is no simple task, especially given that some of the factors that undergo frequent change are out of the hands of the Academy and governed by outside entities like legislative bodies and employers. Advancing the profession while protecting the public is manifest in CDR's commitment to ensuring that certification requirements model current dietetics practice. To achieve this goal, CDR conducts periodic studies (called practice audits) to examine the roles and responsibilities of RDs, DTRs, specialists, and advanced practitioners. The audit results are used to update the certification test specifications ensuring that the examinations are based on actual practice. CDR has voluntarily submitted to an external review of its certification programs by the National Commission for Certifying Agencies and has earned recognition for compliance with these industry standards through accreditation of its registration programs since the 1980s.[2,12] Periodic practice audits as a basis for test specification updates are an essential component of the accreditation process.

CDR's first official study of dietetics practice took place in 1980.[13] These studies, originally called role delineation studies but renamed "entry-level practice audits," were used to codify performance responsibilities and requisite knowledge for competent performance, which would ultimately determine the content areas included on the registration exams and their relative weightings. With the audits now performed every 5 years, these results, combined with data obtained from interviews and periodic employer focus groups, provide CDR with a glimpse into the practice competencies needed to succeed in the marketplace and a projection of what may be expected in the future.[12] The recurring entry-level practice audits[14-18] lead to periodic additions, deletions, and reclassifications of dietetics knowledge and skills addressed on the exams and adjustments to the proportion of the exam devoted to specific content areas.

Table 1. Number of registered dietitians (RDs) and dietetic technicians, registered (DTRs) from 1991 through 2015

Year	RDs	DTRs
1991	52,506	3,726
1992	54,479	4,029
1993	56,274	4,378
1994	57,200	4,692
1995	59,269	5,060
1996	61,490	5,097
1997	63,465	5,408
1998	65,679	5,662
1999	65,762	5,653
2000	67,406	5,511
2001	68,760	4,913
2002	70,185	4,913
2003	71,299	4,790
2004	71,598	4,530
2005	73,155	4,618
2006	74,274	4,289
2007	76,207	4,214
2008	77,972	4,124
2009	79,411	4,062
2010	81,645	4,239
2011	84,346	4,450
2012	86,661	4,572
2013	89,386	5,129
2014	91,710	5,327
2015	94,473	5,535

As credentialing and licensure are truly a collaborative effort in the mutual interest of consumer protection, CDR has offered its entry-level registration examinations to state licensure boards at no cost for decades—the RD examination has been available since 1985 and the DTR examination since 1987. Licensure qualifications differ from state to state; however, CDR's entry-level registration examinations provide a uniform national standard for entry-level practice competence.

Barbara L. Grant, MS, RD, CSO, a member of the 2012-2013 CDR, observes that other groups, including physicians and physical therapists, see that CDR helps to set the bar for demonstrating continued competence. "We have such high standards in the examinations from the RD exam to the DTR exam to all board-certified credentials. The methodology and psychometrics used show that the people who are passing these exams are, indeed, competent practitioners." See Table 1 for details about how many practitioners have held CDR credentials since 1991.

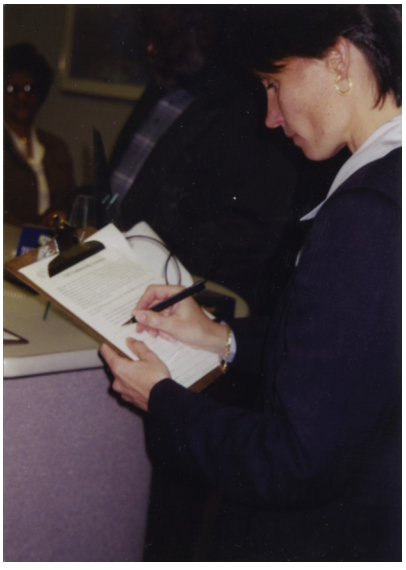
Registration Examinations

The first RD registration exams were administered in January 1970. Though passing rates were mostly consistent for the nearly 2 decades following, the 1988 transition to application-based—rather than knowledge-based—examinations resulted in an immediate, but short-term, drop in the passing rate. As candidates adjusted to the change, the passage rates increased steadily until leveling off in 1992.

At the same time as scores were improving, the registration exam was also subject to a trend creeping across credentialing systems: a move from paper-based to computer-based examination delivery.

Computerized Testing and Registration

CDR initiated discussions on the feasibility of transitioning to computer-based testing in 1982. Computerized testing presented streamlined processes and previously unimaginable advantages to examination administration—specifically, as identified in a 1998 CDR board report, a unique test for every examinee (boosting security) and an ability to assess competence with fewer questions. Test takers would benefit as well because it provided year-round testing opportunities, enabling students to take the exam immediately following graduation; a potential for reduction in the time required to take the test; and immediate score reporting. However, CDR's keen interest in this groundbreaking approach to testing could not supersede a major barrier—a national scarcity of testing facilities equipped with computers—and the idea was temporarily thwarted.[16] The plan was revisited once the proliferation of computers and high-tech applications available in the 1990s made wide scale computer-based testing more feasible.



Joyce Gilbert, PhD, RD, LDN, on a Commission on Dietetic Registration field trip to explore computer-based testing in 1998.

In the mid-1990s, CDR began working collaboratively with American College Testing Inc (ACT) to develop a computer classification test system—a variable length examination composed of highly discriminating items for a passing score that classifies test takers as minimally competent and ready to practice, or not.[19] The dietetics profession was among the early adopters of computer-based testing in the health professions: nursing and respiratory therapy had adopted computer-based testing in 1993 and 1998, respectively.[20] The paper-based dietetics registration exam was discontinued effective September 1, 1999. Though the passing rate on the new computer-based exam was very high (91%), this innovative testing approach was not greeted enthusiastically by all practitioners at first—in the first 2 months after it was launched, only 20% of the 3,000 eligible candidates opted to sit for it. Ultimately, it was embraced as the ubiquity of computers led to increased comfort with electronic systems.[20] "For those not trained in computers, it was a challenge," says Jessie Pavlinac, MS, RD, CSR, LD, 2009-2010 Academy president, "but we survived."

System upgrades did not start and stop with the examination itself. Technology improvements streamlined

There was a celebratory mood in the air when the Philippines became the first country outside of North America to sign a reciprocity agreement with the Commission on Dietetic Registration (CDR) in 1992. Pictured clockwise from top left: Pat Babjak, executive director of CDR; Hermogenes P. Pobre, chairman and commissioner of the Philippines Professional Regulation Commission; Beverly Bajus, chief operating officer; Sanirose S. Orbeta, MS, RD, chairman of the Board of Nutrition and Dietetics Professional Regulation Commission; and Harold Holler, RD, then-vice chair of CDR.

systems in other facets of the registration process. In 2004, CDR implemented the online credential registration and maintenance system. Moving the application process from a software-based to an internet-based system represented an important step in simplifying the registration eligibility application process for all involved.

International Reach

International credentialing has long been in the purview of CDR. The first international registration eligibility reciprocity agreement was signed with the Dietitians of Canada in 1974. Under the terms of this agreement, Active members of the Dietitians of Canada were eligible to take the CDR registration examination for dietitians without completing educational preparation in the United States, and US RDs qualified for membership in the Dietitians of Canada without completing additional academic preparation in Canada.

For nearly 2 decades, Canada remained the only country with a reciprocity agreement with CDR. But in 1993, CDR established a model reciprocity agreement and criteria. CDR entered into discussions with dietetics credentialing bodies in several other countries—including Great Britain, the Netherlands, Philippines, Australia, Ireland, New Zealand, India, Mexico, and Scotland—to initiate a dialogue about reciprocity and expand its international reach beyond North America. The Dutch Association of Dieticians was the first organization outside of North America to sign a reciprocity agreement in 1993, followed by the Philippines Professional Regulation Commission in the same year, the Irish Nutrition and Dietetic Institute in 1997, and the Council for Professions Supplementary to Medicine in the United Kingdom in 2001.

These reciprocity agreements supported the Academy's keen interest in international presence. But by 2003, when the Accreditation Council for Education in Nutrition and Dietetics (ACEND)[‡] developed its International Review for Substantial Equivalency—which allowed individual academic programs to apply for recognition of equivalent academic preparation without having to await compliance with uniform national standards by all institutions within the country—the reciprocity agreements were no longer needed. CDR discontinued entry into new agreements in 2002, but continues to accept practitioners from countries with existing agreements, including Canada, the Netherlands, the Philippines, and Ireland. CDR and the Council for Professions Supplementary to Medicine in the United Kingdom mutually agreed to discontinue their reciprocity agreement in 2014.

In 2012, CDR made the decision to discontinue registration eligibility for graduates of ACEND substantially equivalent accredited programs, effective July 1, 2019. At this same time, CDR acted to accept graduates of programs accredited under ACEND's new international accreditation process for international dietetics programs. ACEND's international accreditation includes a required supervised practice experience in the United States.

Board specialist credentials are also highly valued in the international market. In 2012, CDR approved motions that Canadian RDs be eligible to take the credentialing examination for sports dietetics, renal, pediatric, gerontological, and oncology board specialties provided they meet the certification eligibility criteria.

Evolution in Continuing Professional Education: Self-Assessment and the Professional Development Portfolio

CDR's credentialing system has had a mandatory continuing professional education (CPE) component since its inception in 1969, based on the premise that "self-directed, interactive, experience-based" activities related to

[‡]*At the time this decision was made, ACEND was called the Commission on Accreditation for Dietetics Education, or CADE.*

an individual's professional practice are essential to maintain competence.[21]

In 1992, CDR debuted its *Self-Assessment Series for Dietetics Professionals: An Approach to Continuing Professional Education*. This series of simulated practice scenarios was developed in collaboration with the Pennsylvania State University Office of Program Planning and represented an objective way for practitioners to determine their knowledge and skills gaps to inform the continuing education that would maximally benefit them individually. The first module addressed management skills. In the immediate years that followed, as the modules were redesigned for improved usage by institutions and groups, additional modules were added to the mix: nutrition assessment and nutrition care plans in 1993, nutrition counseling and nutrition care planning in 1994, and research and nutrition education for consumers in 1995.

The National University Continuing Education Association conferred regional and national awards for the self-assessment series in 1993. The modules were ultimately phased out due to their outdated technology (most were paper and video-tape based) and replaced with CDR's online Assess and Learn modules in 2007. This system of multiple-choice questions—based on evidence-based nutrition information, current research in the literature, and disease-specific consensus guidelines and recommendations issued by the government—yields immediate feedback to practitioners in knowledge and skills gaps in specific areas in the nutrition care process. Practitioners were then able to use that information to inform their professional development plans. The first Assess and Learn modules, made available in 2008, were Managing Type 2 Diabetes Using the Nutrition Care Process, Sports Dietetics: Nutrition for Athletic Performance, and Gerontological Nutrition. Celiac Disease was added in 2012.

CDR's efforts to strengthen practitioners' professional development included the 1994 launch of the CPE database, a searchable database that provided practitioners with a means for finding credit-granting programs that met their individual needs. The database allowed (and still does today) individuals to search for continuing professional activities by topic, location, date, or activity type. These offerings were only part of a larger effort to enhance the professional competence program. The beginning of a revolutionary approach to professional development was just around the corner.

Professional Development Portfolio Help Center at the 2012 Food & Nutrition Conference & Expo in Philadelphia, PA.

SUPPORTING CONTINUED COMPETENCE: RECERTIFICATION AND CPE

In the 1990s, as the Academy embraced strategic planning and other internal structural changes, the time had also come for CDR to review its recertification system. As the IOM pushed for a greater emphasis on quality health care, CDR's mission, to administer rigorous valid and reliable credentialing processes to protect the public,[22] became ever more urgent.[7]

The 1994 Futures Search Conference, jointly sponsored by CDR and the Academy, laid the foundation for changes in the recertification process. While deliberating on the future of education, practice, and credentialing in the decades to come, participants agreed that "professional accountability for continuing competence" was a top priority.[19] This determination was not unique to dietetics: the Interprofessional Workgroup on Health Professions' 1997 Summit on Continued Competence represented the assembly of 17 major health professions along with dietetics—dentistry, medicine, nursing, occupational therapy, pharmacy, respiratory care among them—to determine novel ways for addressing and assessing the professional competence of practitioners.[21] Ultimately, recertification modifications, including the professional development portfolio, were implemented in the interest of bolstering registrants' willingness and ability to embrace these tenets and demonstrate professional competence, identified as a practitioner's "ethical obligation."[22]

Former chairs of the Commission on Dietetic Registration gather for a Past Chairs Tea at the Hyatt Chicago during the 2008 Food & Nutrition Conference & Expo. Seated, L to R: Cheryl Bittle, PhD, RD, LD; Colleen Matthys, RD; Polly Fitz, MA, RD; Margaret Bogle, PhD, RD, LD; Linda Lafferty, PhD, RD, FADA. Standing, L to R: Kathleen Cobb, MS, RD; Carol Shanklin, PhD, RD, LD; Joyce Gilbert, PhD, RD, LDN; Deborah Canter, PhD, RD; Erskine Smith, PhD, RD; Jody Vogelzang, PhD, RD, LD, FADA, CHES; Robyn Wong, MPH, RD, CSP.

The Professional Development Portfolio

In the mid-1990s, multiple organizations were encouraging greater accountability within health care. "Impetus for change in this area was fueled by the IOM report on medical errors, which recommended strengthening standards for continuing competence," notes Constance Geiger, PhD, RD, chair of the 2002-2003 CDR Competency Assurance Panel. Concurrently, both the Joint Commission and the Pew Health Professions Commission were asserting that documentation of CPE units (CPEU) alone was insufficient as a means to demonstrate competence. Although the Joint Commission's stance was merely expressed in its standards regarding hospital staff, the Pew Commission released a report that explicitly called on state legislators to demand greater accountability from health care practitioners in demonstrating competence and that the effort encompass more than just CPEUs.[23]

The Pew Commission's caution about competence was not without cause: at the time the report was released, many health professions embraced the notion that "once licensed=forever competent" and resistance to recertification requirements beyond participation in CE courses was endemic.[21] But the Pew Commission did not close out the issue with mere criticism—a 1998 follow-up report credited the professional organizations that were leading the charge in issues related to competency and proposed that these groups employ needs assessments and evaluations of learning outcomes to bolster CPE programs.[23]

Thus, with the reports of the IOM and the Pew Commission's arguments and the knowledge that a laissez-faire approach to recertification left practitioners vulnerable to requirements of employers and legislative bodies without input from the profession,[24] CDR created the Professional Development Portfolio (PDP).

The PDP represents a framework for guiding practitioners to identify their own learning needs and goals to attain CPE units,[21] based on the belief that effective CPE must identify what needs to be learned, use educational methodology that maximizes learning, and offer strategies to transform learning into practice.[23]

The portfolio model capitalizes on findings that in the absence of targeted goals, CPE does little to improve practitioner performance or patient outcomes.[25] The PDP represented the much-needed means for practitioners to "conduct regular self-assessments based on self-reflection and feedback from a variety of sources to identify needs for professional development, develop and implement a plan for professional growth, and evaluate the effectiveness of the plan" while assuming responsibility for accurately determining what knowledge they lack in order to bring these requisite skills into practice.[23]

"At that time, many health-credentialing agencies evaluated and redesigned their systems for continuing education," says Geiger. Although a passing score on a recertification exam along with a set number

of fulfilled continuing medical education hours have long been required for recertification, "Most medical, nursing, and allied health credentialing agencies implemented other significant changes to their recertification systems—for example, the American Board of Medical Specialties required all its specialty certification boards to have time-limited certificates with a system to demonstrate continued competence and the College of Nurses of Ontario implemented a portfolio process for recertification."[23]

The portfolio process was a natural fit for CDR, as it "is widely used throughout the education community and it translated well to the important process of lifelong learning for the dietetics professional," Geiger says.

The redesign process began in 1995 when the CDR Competency Assurance Panel drafted its first iteration of the PDP, which was assessed by practitioners the following year; a later version was nationally pilot tested by Oklahoma State University in 1998. Outcomes of that test were used to refine the PDP for its 2001 implementation.[23]

These modifications changed the primary role in recertification that CDR had been serving. Previously CDR's primary task had been to approve or deny individual CPE activities; now CDR became a collaborator with practitioners by providing the tools to help them identify learning goals and needs and then verifying completion of all subsequent steps (see Figure 2) along the way. Random portfolio audits were written into this process in response to communicated practitioner interest in greater accountability.[23]

As with any system upgrade, it took some time for practitioners to become fully accustomed to the PDP, but CDR has seen great gains in the years since its implementation. According to CDR data, since 2008, RDs and DTRs have consistently recertified at a rate of 96% to 97%.[11]

The PDP has been an enhancement for the profession and the practitioners in a variety of ways, Geiger notes. "For the profession, the intent was to enhance continuing competence. Research on continuing education systems shows that conventional, untargeted continuing education is not very effective in improving patient outcomes or changes in practitioners' behavior. What is effective is continuing education that is based on evaluation of what the practitioner knows and what the practitioner needs to learn to meet his or her goals." For practitioners, she adds, "The PDP places the responsibility for professional competence in their hands. Self-directed assessment, goals, and learning are more pertinent to practitioners and should be complementary to their performance evaluations in the workplace."

PDP: THE NEXT GENERATION

Historically, like most allied health organizations, CDR's initial certification and recertification systems have been knowledge-based programs, given the challenges inherent in measuring skills and attitudes. In the last decade, some certifying groups have begun including competencies as part of their recertification system. Competencies provide a more realistic or more complete inventory of knowledge, skills, and attitudes that are required for professional practice and are increasingly used by employers as well as accrediting agencies such as the Joint Commission and Centers for Medicare & Medicaid Services.

In 2012, the CDR Competency Assurance Panel initiated the transition from the initial PDP recertification system based on learning need codes to dietetics practice competencies. This new system benefits CDR credentialed practitioners, as well as other stakeholders in the credentialing environment. In addition to providing a recertification platform for the practitioner it will also support the documentation of practice competencies that are more job-related. The practitioner can use the documentation for documenting competencies for employers or external accrediting agencies to support job up-skilling, changing of practice focus areas, or re-entry into practice after an absence.

In July 2013, a workgroup of CDR credentialed practitioners representing diverse practice and geographic perspectives met to write the practice competencies. The draft competencies were sent to all CDR credentialed practitioners in March 2014 for a National Validation Study. Practitioner input on the competencies was used by the joint CDR Competency Assurance Panel/Quality Management Committee Workgroup to further refine the competencies. An article highlighting the results of the National Validation Study results was published in the June 2015 *Journal of the Academy of Nutrition and Dietetics*.[26]

With the inclusion of the validated practice competencies online *Goal Wizard* tool, the PDP recertification system has been streamlined from five to three steps. This new tool combines the previous reflection, self-assessment, and learning development PDP steps into one step culminating in the practice competencies based learning plan (Figure 3). CDR credentialed began the 5-year transition to this new practice competencies-based recertification system in 2015.

NEW ETHICS REQUIREMENT

Attainment of at least one CPEU specifically pertaining to ethics was added to the recertification requirements; RDs and DTRs entering a new recertification cycle in 2012 were the first practitioners subject to this new obligation. They were required to attain at least one CPEU specifically pertaining to ethics. This new requirement was a direct recommendation from the Academy's Board of Directors in 2011 and adopted by CDR in 2012.

Although targeted learning requirements were not previously mandated for recertification, the Board of Directors was looking to encourage continuing education in areas critical to current dietetics practice. After deliberations for selecting a topic, the 2010-2011 CDR decided that "because ethics is relevant to all areas of practice," ethics would be the focus of targeted learning requirements.

A 21st Century Development: CDR's Mobile App

A major turning point for RDs and DTRs in managing their recertification came late in 2012, when CDR released a beta test of a mobile application—*GoPDP*—to more easily track professional development goals. At the 2012 Food & Nutrition Conference & Expo, RDs and DTRs for the first time had the opportunity to use this app to enter their CPEUs. The idea was based on the general picture of what it is like to attend a national professional conference: going from one

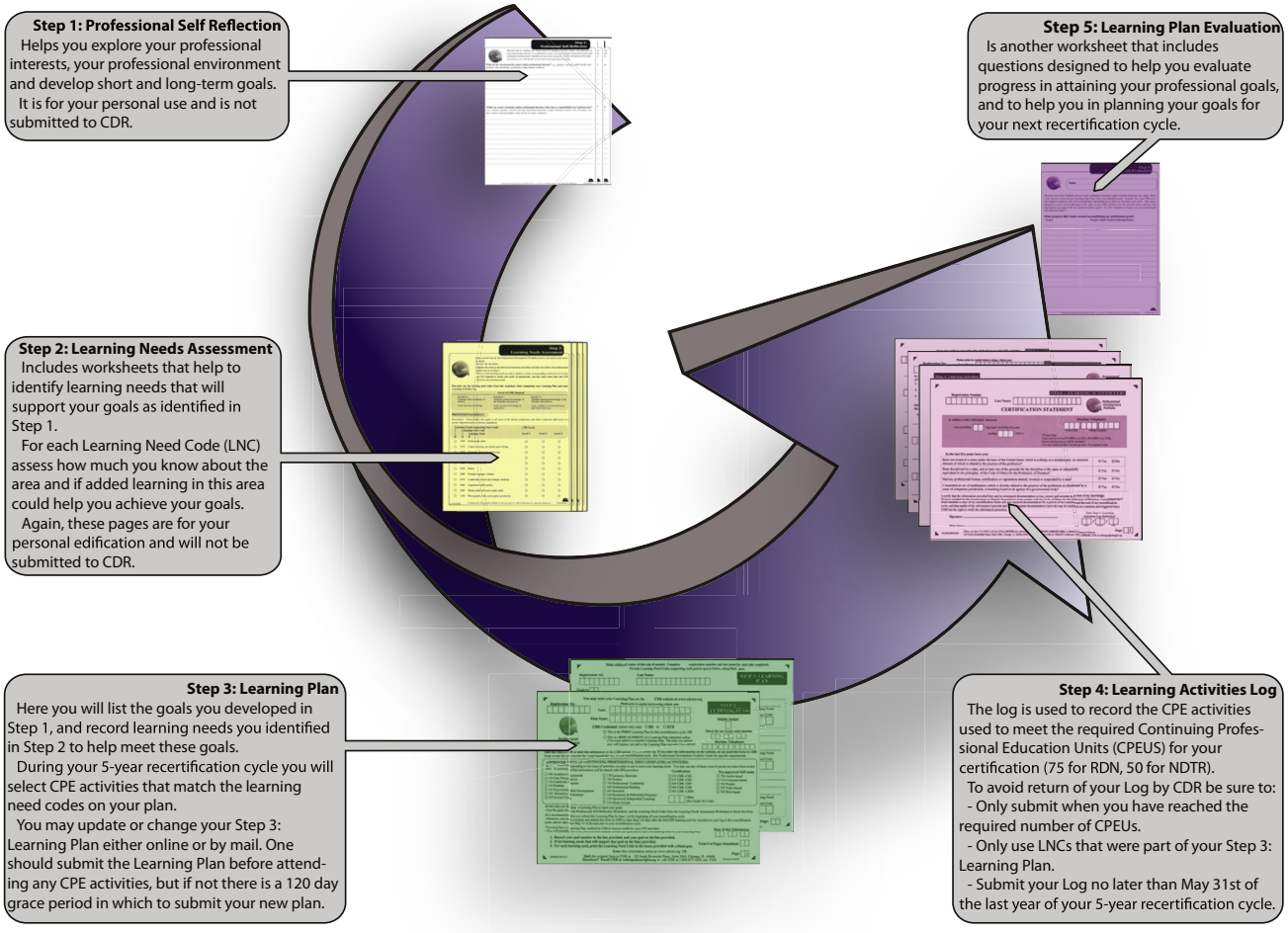


Figure 2. What is the professional development portfolio? CDR=Commission on Dietetic Registration. CPE=Continuing Professional Education. RDN=registered dietitian nutritionist. NDTR=nutrition and dietetics technician, registered.

educational session to the next, attendees often find themselves with some downtime.

GoPDP was created to serve as a handy tool that addresses some of the biggest time-management needs of busy practitioners. The app allows users to immediately log all CPEUs attained throughout the day, including a means for photographing the certificate of completion and uploading it to the CDR server as a record of proof of attendance. Because the scroll wheel includes only the learning need codes that are relevant within an individual's PDP, this application is expected to inform future updates to the online PDP itself.

Keeping Up with the 21st Century Requirements: A New Website

The ubiquity of technological advances requires periodic updates of most systems—especially online. Since CDR's website—www.cdrnet.org—was first launched in 1999, website capability has expanded to allow for much more efficient and user-friendly programs. In 2013, CDR launched a website redesign that first and foremost takes in account the needs of professionals interested in credentialing.

In addition to boasting a new look and feel, CDR upgraded its website to allow for interactivity with mobile devices, a live chat function with CDR staff, and a MyCDR page that, in a sense, creates one-stop shopping for credentialed individuals. MyCDR provides individuals access to their PDP learning plan and activities log, an online transaction section to pay registration maintenance fees, access to update one's own profile information, *Journal* quizzes, and links to register for a weight management certificate program or complete a board certification specialist examination application.

CPEU for Learning Preceptor Skills

Despite the prevalent belief that precepting is a rewarding experience, and despite the provision of CPEUs for

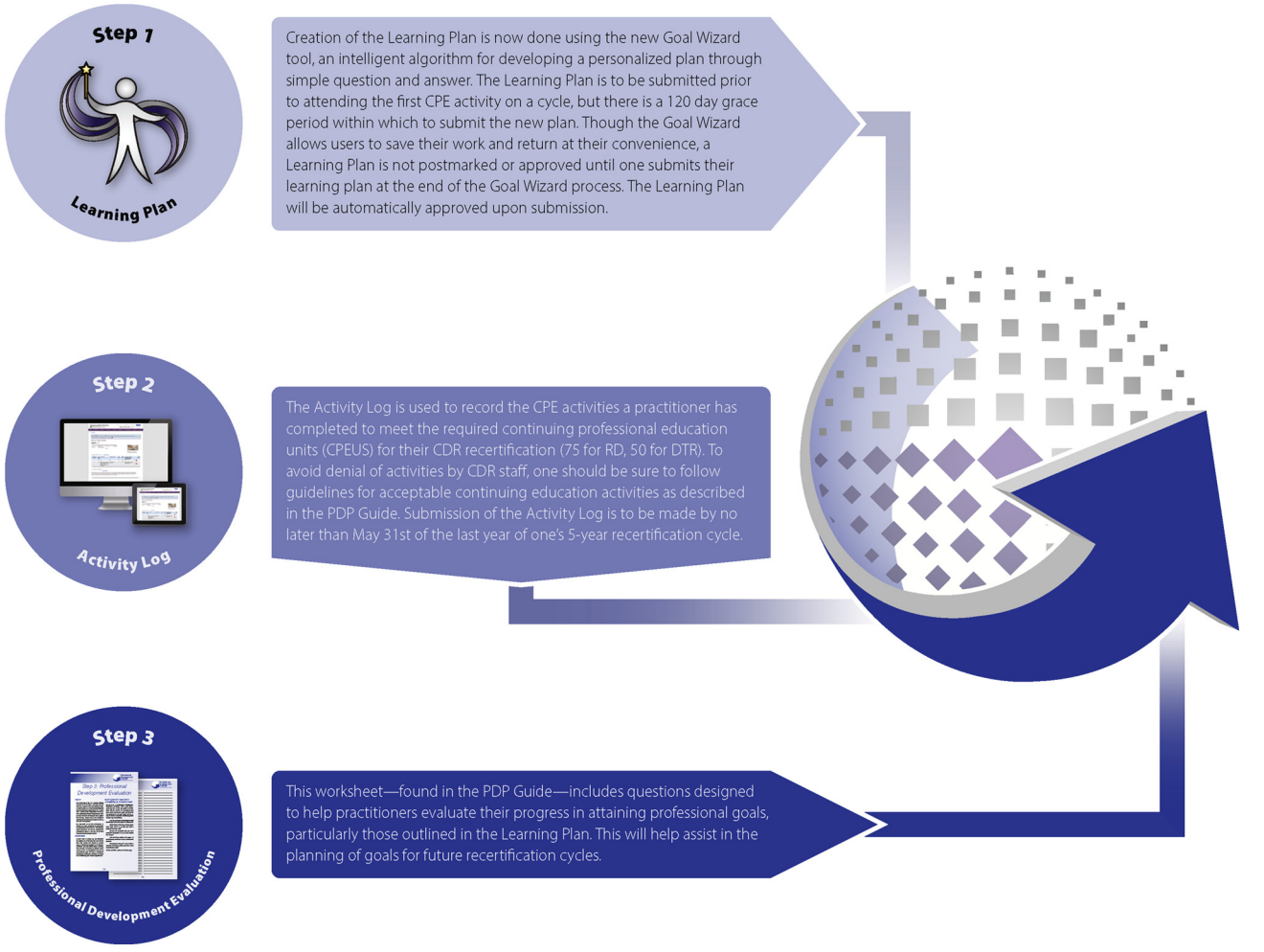


Figure 3. CDR=Commission on Dietetic Registration. CPE=Continuing Professional Education. RD=registered dietitian. DTR=dietetics technician, registered.

individuals who pursue professional development activities to attain associated precepting skills, preceptors have been in short supply. This shortage is not unique to dietetics—nursing, for example, is confronting multiple challenges within this strained system in finding enough willing preceptors who have or have access to attaining the right training to be trainers[27-29]—and it certainly has the attention of CDR and ACEND, which identified preceptorship as the "limiting factor in providing a sufficient number of supervised-practice experiences to meet demand."[30]

To address the shortage of preceptors, as health care professions were beginning to buzz about an online preceptor training model,[31] a proposal was drafted by an appointed Preceptor Training Certificate Task Force in 2005 to create an optional online dietetics preceptor training program. This program, designed with the goal of strengthening the educational preparation of preceptors and thus enhancing the quality of future practitioners, was piloted in 2007; a refined and adjusted program was released within the same year. This course remains available as a free resource for preceptors at www.cdrcampus.org.

In 2011, CDR established a $370,000 Simulation Grant Fund for the development of dietetics practice simulations that address entry-level practice skills that educators have indicated are difficult to fulfill due to the preceptor shortage. To date, simulation grants have been awarded to the University of Oklahoma, Pennsylvania State University, and the Academy of Nutrition and Dietetics Research Team.

EXPANDING THE CREDENTIALS

CDR's frequent assessment of the professional landscape results in the addition, and occasional dissolution, of credentials. In addition to the RD and DTR credentials, other credentials and certificates have been added to better protect the public and accommodate the needs of the profession at large.

The DTR Credential

Soon after dietetic technicians were offered membership in the Academy, the DTR credential, which recognizes that an individual with the appropriate training as a dietetic technician meets specific certification standards, was established in 1986. Over 3,600 DTRs were grandfathered in as DTRs on June 1, 1986. The early years of this program witnessed a few growing pains as CDR worked tirelessly to create a registration

Table 2. Number of food and nutrition practitioners with board-certified specialist credentials, 1993-2015

Year	Gerontological nutrition	Oncology nutrition	Pediatric nutrition	Renal nutrition	Sports nutrition
1993	—	—	54	71	—
1994	—	—	100	106	—
1995	—	—	129	134	—
1996	—	—	163	156	—
1997	—	—	175	178	—
1998	—	—	192	201	—
1999	—	—	192	201	—
2000	—	—	213	216	—
2001	—	—	252	259	—
2002	—	—	299	312	—
2003	—	—	369	346	—
2004	—	—	344	320	—
2005	—	—	356	338	—
2006	—	—	384	328	59
2007	151	—	409	380	159
2008	171	147	420	370	233
2009	198	218	452	411	299
2010	320	370	569	454	415
2011	389	483	648	469	501
2012	446	546	648	469	528
2013	527	648	760	514	610
2014	559	667	832	567	679
2015	578	680	895	598	764

examination and recertification system and established a seat on CDR for a DTR representative that same year.

According to a fall 2003 HOD mega issue backgrounder, the role of DTRs in the profession and the Academy did need occasional examination and clarification, which the Dietetic Technician Task Force took up in 1993 and again in 1999. The task force recommendations sufficiently addressed many of the primary concerns focusing on establishing the value of the credential and more firmly rooting these practitioners into the nutrition and dietetics care team.

Throughout these discussions, the program stayed strong. According to historical data from CDR, as more food and nutrition professionals with associate degrees pursued the credential, the registry continued to grow. The number of DTRs in CDR's registry was at just over 3,700 in 1991 and grew to almost 5,700 by 1998.

Yet, after that steady climb in the DTR registry, there was a slow but notable decline. CDR quickly acted to determine the root causes of this decline. The uneven geographic distribution of practicing DTRs throughout the country—in 2010, there were 16 states with fewer than 10 DTRs[32]—coupled with declining enrollments in ACEND accredited dietetic technician programs—in 2016, there are 42 programs across 24 states,[33] in 2003, according to the HOD backgrounder, there were 68 programs across 29 states—contributed to the slow steady decline in the dietetic technician registry. Both of these factors posed challenges for marketing and promoting the credential nationally.

Though a solution was not immediate, what happened next did, in fact, result in a reversal of the downward trend. CDR saw that the greatest opportunity for increasing the number of DTRs across the nation—and, thus, augmenting the recognition and acceptance of their value as part of the nutrition and dietetics care team—was to create an alternate pathway to eligibility for the credential. This new route, implemented in 2009, opened the door to credentialed status by allowing graduates of didactic programs in dietetics (DPD) to sit for the DTR registration examination without obtaining the additional academic or supervised practice requirements.[34]

In June 2016, the DTR registry had grown to over 5,500, marking the sixth year of positive growth since implementation of the new DPD Program graduate pathway. Although the Council on Future Practice 2012 Visioning Report included a recommendation to discontinue the DTR Credential, CDR made the decision to continue to support the credential as long as it's financially feasible to do so. The positive DTR registry growth statistics over the past 6 years support CDR's ongoing commitment to the DTR credential.

Board Certified Specialist and Advanced Practice Credentials

If minimum competencies across the practice spectrum are to be identified, clear demarcation of practice levels is necessary. A system for defining and validating entry-level dietetics practice has existed for years. The entry-level dietetics practice audits for RDs and DTRs, conducted every 5 years, are used to update this definition.[14-18] The data compiled from these demographic and task/activity questionnaires help to identify the knowledge, skills, and competencies required to compete in the entry-level marketplace. Developing this profile of newly credentialed individuals and what activities and tasks they should expect in the first 3 years of practice is considered the ultimate target for determining academic and professional preparedness standards to certify accomplishment.[12]

A definition of advanced practice, despite intense interest from the Academy leadership and membership,

remained a challenge for CDR and the Academy over the years. Unlike nursing, where "advanced practice" applies to four distinct professional titles, traditional postgraduate dietetics programs have had minimal, if any, specific coursework to prepare RDs for careers beyond academia.[35] The lack of consensus among groups within the organization and educational programs has been a major barrier to resolving this issue.[7] Leaving the issue alone was never an option. Competent dietetics practice requires so many different skill sets that employers are not able to recognize what constitutes entry-level vs advanced-level practice, translating to minimal gains in compensation and benefits regardless of practice level,[36] so it was imperative that the Academy and CDR make this determination in order to relate levels of practice to gains in compensation and other benefits.

Early on, the need for specialization was recognized. A 1978 committee proposed an American Board of Dietetics Specialties.[37] The Report of the 1984 Study Commission on Dietetics recommended further study of specialization and advanced degrees beyond entry-level recognition.

The 1991 Dietetic Practice Study[38] for both advanced and specialty practice provided definitions, functional roles, and responsibilities, conducted under contract by CTB MacMillan/McGraw-Hill, represented the first attempt to establish formal definitions of advanced and specialty dietetics practice. This study, which followed a 1986 House of Delegates ad hoc committee attempt to create role delineations for advanced practice and the Academy's first-ever conference on advanced practice and research in 1987,[2] distinguished the definition of practice mastery based on *how* tasks are performed (rather than *what* tasks are performed); it incorporated measurable outcomes such as weekly hours worked, scope of duties, years of education, receipt of professional awards and/or recognition, experience with delivering professional presentations, and number of contacts in their professional role, as well as subjective outcomes such as greater incorporation of "intuition/feelings" and "novelty/innovation" into practice.[37] Thus, the Academy's early hierarchy of entry-level, beyond entry-level, and advanced practice was born.[38]

Soon after the results of this study were published in 1993, beginning with pediatric, renal, and metabolic nutrition specialties, CDR added "board-certified specialist" to its list of available credentials in the beyond entry-level category.[§] In October 1993, CDR administered board certification examinations to its initial pool of 234 applicants in pediatric (CSP), renal (CSR), and metabolic nutrition.[‖] Pavlinac, a longstanding renal specialist, notes that the specialist credentials set apart the RDs who have attained a greater depth and breadth of skills within a specific area of practice.

Based on a specialist petition, market survey data, and documentation of measurable benefits to the profession and employers submitted by practitioners, dietetic practice groups (DPGs), and workgroups, CDR has since added specialist certifications in sports dietetics (the CSSD, in 2006), gerontological nutrition (CSG, in 2007), and oncology (CSO, in 2008).[39] The inherent value of these specialist credentials is evident in the explosion in the numbers of CSP-, CSR-, CSSD-, CSG-, and CSO-credentialed practitioners (Table 2).

Barbara Grant, MS, RDN, CSO, has witnessed first-hand just how rapidly the specialist credential can transform an area of practice—even a practice area like oncology dietetics, which has a comparatively smaller pool of practitioners. In 2005, along with Rhone Levin, MEd, RD, CSO, LD, Grant led a workgroup at the request of the Oncology Nutrition DPG request to draft a proposal for an oncology specialist credential (the CSO). After analyzing the practice scene and gathering evidence that such a credential would have market value, says Grant, "We presented our findings in 2006. And 6 years later, we went from this general idea that we needed a practice credential in oncology to actually having a credential and almost 600 CSO-credentialed RDs. It's amazing that job announcements now say 'RD required, CSO preferred.'" It was easy to prove the value of the CSO, given the nature of the field. "As clinicians, RDs in cancer centers work in a certified world. All of the other health professions in oncology—nurses, pharmacists, social workers, dosimetrists, physicians—were already certified," Grant adds. "The [CSO] raises the bar for our own practice in helping to protect the public so that patients coming into cancer centers are receiving oncology nutrition care from competent practitioners."

Bea Dykes, PhD, RD, LD, FADA, and Sanirose Orbeta, MS, RD, FADA, stand before a sign welcoming the new class of Fellows at the 1996 Food & Nutrition Conference & Expo in San Antonio, TX.

The board specialist certification program has come to represent the primary means for addressing the need for practice beyond entry level in dietetics. RDs who lament a lack of reimbursement, respect, and rewards for their level of practice reap much satisfaction from obtaining these credentials; the Council on Future Practice 2012 Visioning Report included unpublished CDR data that 90.4% of credentialed board specialists had increased pride and personal satisfaction as a result of this credential, 54.9% reported recognition by peers, 63.5% appreciated that the credential was an inherent demonstration of their competencies, and 51.4% celebrated employer recognition.[40]

In February 2013, representatives of the Weight Management (WM) and Diabetes Care and Education (DCE) DPGs submitted a petition for the

[§]*The nomenclature for this program was changed from "specialty" to "specialist" based on the Council on Future Practice 2011 Visioning Report.*

[‖]*The metabolic nutrition credential was discontinued in 1997.*

development of a new obesity and weight management specialist certification for RDs to the Academy's Council on Future Practice, the organization unit charged with the evaluation of new specialist certification petitions. In 2014, CDR once again demonstrated its commitment to innovation with its decision to move forward with development of an interdisciplinary Board Certified Specialist in Obesity and Weight Management certification program. The credential designation for this certification is Board Certified Specialist in Obesity and Weight Management (CSOWM).[41]

Over the next 2 years, interdisciplinary workgroups including RDs, nurse practitioners, physician assistants, licensed clinical psychologists, clinical exercise physiologists, and licensed clinical social workers collaborated on the examination development process. The first examination administration is slated for early 2017.

In 1994, CDR began offering the Fellow credential, the FADA (Fellow of the American Dietetic Association), as the advanced practice credential. The FADA credential was granted to applicants who met specific criteria for advanced-level practice—current status as an RD, conferred a master's degree or higher, completed 8 years of work while maintaining RD status, demonstration of professional achievement, occupation of varied professional roles with complex, diverse job responsibilities, and a broad network of diverse contacts[38-42]—and submitted a portfolio that delineated an approach to practice that successfully demonstrated global orientation, innovation, creativity, intuitive judgment, and professional growth.[43] In addition to providing an immediately recognizable distinction, these board certifications and the FADA credential were intended to address the increasing number of experienced practitioners leaving the profession, partly because of the lack of professional advancement and recognition opportunities.[44]

The Fellow certification program was discontinued in 2002 because the actual number of practitioners who pursued the credential (40 to 50 annually) fell far short of projections (300 annually).[40] The program was initially met with praise: A 1996 HOD report noted that at a management conference, the American Society of Association Executives had hailed the FADA credential as an innovative prototype for performance assessment; following that presentation, other professions within allied health in the United States and Canada (including physical therapy and pharmacy) sought CDR's input in creating their own programs. When the decision was made to discontinue accepting applications to obtain the FADA credential, CDR granted lifetime use of the FADA designation to recognize the RDs who had already attained the credential.[45] CDR recommended to the Academy Board that FADA be redesigned as a recognition program. Although several years elapsed before this recommendation moved forward, in late 2013, the Academy established the Fellow of the Academy of Nutrition and Dietetics program (FAND), recognizing members who have made significant and sustained contributions to the field of nutrition and dietetics, making her or him a role model. FANDs have distinguished themselves among their colleagues, as well as in their communities, by their service to the dietetics profession and by optimizing health through food and nutrition.

In 2005, CDR established a Levels of Practice Audit Committee charged to conduct a study to identify and define levels of dietetics practice. The study objectives were to identify advanced practice in dietetics, define advanced practice in dietetics, and provide a foundation for the development of a possible advanced practice credential. The study was conducted between 2005 and 2007. Upon analysis of the study results, the committee was disappointed to find that the overall results did not support the existence of a common thread of advanced-level dietetics practice that crosses all practice segments/areas: FADAs could not be distinguished from advanced level practitioners or beyond entry-level practitioners by their responses to activity statements. However, they were distinguished by their attributes, especially for those practicing in an education setting. The study survey could not differentiate advanced dietetics practice. Based on the study results the committee recommended the following: that any advanced-level practice credential considered in the future would need to be related to a specific practice area and that advanced-level practice needs to be identified by task-supported data vs attributes in order to adhere to sound psychometric practice and to meet CDR external accreditation standards.[46]

At the 1996 Food & Nutrition Conference & Expo, Pat Queen-Samour, MMSc, RD, who has served on the Commission on Dietetic Registration (CDR) Specialty Certification Panel, poses with past CDR commissioners Julie O'Sullivan Maillet, PhD, RD, FADA, and Wanda Hain Howell, PhD, RD.

Still, one of the Phase 2 Future Practice and Education Task Force's major recommendations, as outlined in a 2008 HOD report, was that a definition of advanced practice be established. The Council on Future Practice, was tasked with collaborating with all stakeholder entities—CDR, the Education Committee, ACEND, and functional divisions of the Academy—to establish formal definitions of practice levels.[7] These definitions—which stratified practice levels as novice, beginner, competent, proficient, and advanced—were graphically represented as a helix that was published in Council on Future Practice's Future Visioning Report 2011.[40] The Council on Future Practice's 2012 Visioning Report to the HOD furthered the dialogue on this subject and recommended that more board specialist credentials be added to the registry where there is a demonstrable need, that existing credentials be reconsidered, and that an advanced-practice credential be developed based on objective evidence. With these recommendations in the immediate sight of the profession, CDR, the Council on Future Practice, and ACEND continued its close collaboration to resolve issues surrounding advanced practice.

In 2009, with those same goals in mind, CDR established grant and scholarship funds to be administered by the Academy of Nutrition and Dietetics Foundation. An advanced practice residency fund was established to foster and support advanced practice residency programs or provide practitioners with the funds to participate in an advanced practice residency. In addition, in the interest of addressing the shortage of dietitians who hold doctoral degrees, CDR established the CDR Doctoral Scholarship for RDs enrolled in a clinical nutrition, research, science, education, or public health or practice doctorate program.

An alternate approach to studying advanced practice arose from a suggestion that had been published in CDR's 2005 practice audit. Since the delineations used in the levels of practice study ultimately were deemed too broad, potentially skewing the results, any future studies should examine narrower practice area segments.[46] In 2011 an Advanced Clinical Dietetics Practice Audit Task Force was appointed to pursue this study. Clinical nutrition practice—defined for study purposes as "the provision of direct nutrition care to individuals and groups"—emerged as the first practice area to be subject to practice level analysis in 2013. Upon completion of the study, the task force was pleased to report that analysis revealed an advanced practice population of RDs. Over the following 18 months, CDR collaborated with subject matter experts to develop the Advanced Practice in Clinical Nutrition certification examination.[47,48] The first examination was administered in November 2015, and the first 22 Registered Dietitian Nutritionist, Advanced Practice in Clinical Nutrition (RDN-AP) practitioners were identified in early 2016.

Training Certificates

Remaining competitive in dietetics means staying on the cutting edge of all topics in food and nutrition, especially those that have the most significant effect on the health of the public. For dietetics practitioners, one of the most important topics is obesity—prevalence of overweight and obesity has steadily increased since the first National Health and Nutrition Examination Survey in 1971; according to statistics published in 2012, approximately 36% of adults and 17% of children and adolescents are obese.[49,50] Professional competency in weight management translates into knowing management options that can encourage patient compliance and sustained success over the long term.

In the late 1990s, CDR undertook the development of a training opportunity to bring additional skills to RDs, DTRs, and Academy members and to elevate their stature as the recognized expert on the health care team to be the clinical case manager of patients. "Everyone recognizes there are multiple modalities that might be used in obesity management such as behavior counseling, pharmacologic interventions, and surgery, but not everyone responds the same to different approaches," notes Richard Mattes, PhD, MPH, RD, who served on the team that drafted the inaugural certificate of training in adult weight management. "People get discouraged and fall out of the system. The idea behind the certificate was that the RD would have enough knowledge of all modalities and would stick with the patient, so if one approach didn't work, the work with the patient could continue until a right solution could be found."

Thus, with the assistance of a program-development educational grant from Knoll Pharmaceutical Company and funding toward administration from Roche Pharmaceutical Company and SlimFast Foods,[51] CDR began offering weight management certificate of training programs in 2001. These certificates, which attest to successful completion of training and a comprehensive assessment based on the course learning outcomes, but do not imply or result in a professional designation or credential, amply addressed CDR's mission and vision by seeking to elevate the status and marketability of practitioners while making it easier for the public to identify who in the health care field had attained focused training in this important niche within health care. Comprising educational information, case studies and practice exercises, resource materials developed and assembled by subject matter experts, and a comprehensive assessment, this expanding certificate program—available to RDs, DTRs, and international, active, and student members—has met with great success.

The pilot year, 2001, saw 500 practitioners pursue certificates in adult weight management. At the time of the launch, says Mattes, it was such a risky venture that no one was thinking the program should be bigger and broader. "Right now, with so much emphasis on obesity, perhaps this seems like a nonissue. But at the time, it was a risky venture that represented moving into new territory for the organization." But as CDR monitored the sustainability of this program, there was notable value to—and demand from—practitioners to keep this program moving forward, and ultimately the childhood and adolescent weight management and level 2 adult weight management (encompassing counseling, pathophysiology, weight maintenance and prevention, and coordination of interdisciplinary care) certificates were implemented, in 2003 and 2009, respectively. By July 2016, weight management certificates had been issued to more than 19,000 individuals.

"The program was successful because CDR brought in the right expertise and the right resources to make this happen," says Mattes, "and

this translated to the right critical mass of skills and interest, and it naturally took off. CDR has devoted considerable energy and resources toward this program to make sure it remains at the cutting edge and is always evolving with the field, so that it will never be static and will never fall behind the times and providing skills to reach a higher level of practice that meets member needs."

The RDN and NDTR

The registered dietitian nutritionist, or RDN, and nutrition and dietetics technician, registered, or NDTR, credential options were a major development for credentialed RDs and DTRs in 2013. Such credential options had been on the radar for several years, as they represented a major topic for exploration, particularly in key discussions centered on the future, as in the 2011 Future Connections Summit[52] and in the Council on Future Practice 2012 Visioning Report.[40] With the Academy name change in 2012, it was the right time to add new credential options that included nutrition in the credential title and offered RDs and DTRs the option to use the RDN credential in place of the RD or the NDTR credential in place of the DTR. Because the RDN intends to better distinguish dietetics credentials for consumers—namely, to clarify the difference between nutrition professionals and dietetics practitioners and to make it clear that not all nutritionists are RDs, but all RDs are, indeed, nutritionists—it was confirmed that the RDN was a necessary, worthwhile, and terrific way to support credentialed practitioners in the competitive marketplace.

WORKFORCE ISSUES

Because CDR is charged with determining the standards for who can be called a credentialed dietetics practitioner, analyzing and responding to workforce issues are major components of CDR's charge. Although CDR has worked in collaboration with the Academy on the many compensation and benefits studies over the years,[53,54] workforce demand represented a top priority issue for CDR in 2010.

Dietetics Workforce Demand Task Force Study

The reality of practicing dietetics, like any health care profession, is subject to external shifts, be they related to consumer, legislative, socioeconomic, or population health concerns. The increasing diagnosis of obesity, coupled with fluctuations in per-capita income, for example, affects just how much consumer demand will focus on dietetics services. In order to be sure that the profession meets the predictable and unpredictable shifts in demand, CDR has to be mindful of ensuring an adequate supply of RDs and DTRs who are credentialed and demonstrate professional competencies.

Based on its charge to move the profession forward while protecting the public, CDR convened the Dietetics Workforce Demand Study Task Force—comprising representatives from CDR, the Council on Future Practice, the Education Committee, and ACEND and chaired by Susan Laramee, MS, RD, LDN, FADA—to project how factors in the present state of dietetics might influence the future of dietetics practice.

The task force spearheaded an effort to provide a baseline analysis of the multiple factors in supply and demand of the dietetics workforce and anticipate what they could mean for the future dietetics practice. Previous Academy studies of the state of education and practice (including the 1981 Manpower Demand Study and the 2008 Phase II Education Task Force Report), and information from strategic futurist researchers, the US Bureau of Labor Statistics, and the Office of Health Professions Education at the University of Birmingham, served as the foundation for this endeavor. The task force commissioned seven research articles—published as the March 2012 *Journal* supplement, "Projections and Opportunities for an Increasing Demand for Dietetics Practitioners: 2011 Dietetics Workforce Demand Study Results and Recommendations"—that examine the issues including education, advanced practice credentialing, and health care reform.[55]

Just as the profession has progressed to embrace an evidence-based approach to practice, the Dietetics Workforce Demand Study has shown that evidence-based analysis of labor issues is productive and necessary. According to Laramee, moving forward, this study establishes "a basis for looking at a more data-driven rather than a subjective view of the future." Results from the studies published in the workforce demand supplement are still registering and resonating with various groups, including the Council on Future Practice, which cited the work of the task force throughout its visioning report on workforce issues submitted to the HOD at its October 2012 meeting. "It provides the foundation for looking at the future and where opportunities exist," Laramee adds.

LOOKING AHEAD

CDR's responsibilities to practitioners and its goals to meet the needs of consumers, employers, and nutrition and dietetics practitioners keep the profession moving forward are continually introduced, evaluated, and upgraded depending on shifts, big or small, in the academic, health care, legislative, and socioeconomic environments.

The periodic adjustments to test specifications (that is, the registration examination content outlines) and administration of the workplace/job market evaluations have come to be an expected part of CDR's operations. The near term promises a likelihood of more changes to the academics, credentialing, and practice of dietetics, and underscores just how essential it is that CDR maintain its efforts to continually evaluate and react to change rather than deny or resist the challenges of change.

The 2011 Future Connections Summit, which assembled representatives of CDR, the Council on Future Practice, ACEND, and the Education Committee to identify the profession's priorities moving forward, identified design principles for future efforts in the credentialing realm[52]:

- Pathways to credentials are broadened to increase flexibility, diversity, and numbers of practitioners.
- Expanded credentialing opportunities promote career growth and autonomy, cut across levels of practice, and ensure the profession has sufficient numbers to meet future consumer needs.
- The specialist and advanced practice credentials identify dietetics practitioners as leaders in

food and nutrition and are recognized and valued by consumers, policymakers, and external stakeholders.
- The dietetics credentials promote and protect the health and wellness of the public.
- The dietetics credentials are globally recognized.

CDR has already demonstrated it is fully competent at meeting these requirements and challenges and, as it propels its operations forward through the 21st century, practitioners are promised to see more of the same.

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	TIMELINE: Commission on Dietetics Registration (CDR)—1969-2016.
1969	• Inception of the Commission on Dietetic Registration (CDR). • Grandfathered 19,457 registered dietitians (RDs). • Established continuing professional education recertification requirement for RDs.
1970	• Administered the first registration exam for dietitians to 56 candidates.
1972	• Institutionalized process for updating exam content and revision of exam specifications.
1975	• 22,519 RDs in CDR registry.
1976	• Amended Academy constitution to allow for registration separate from Academy membership.
1979	• Initiated 3-year Predictive Validity Study to measure the relationship between performance on the exam and performance on the job. • Completed the Content Analysis Project for the registration examination for dietitians. • Appointed the first public representative to CDR.
1980	• Granted conditional, 1-year membership in the National Commission for Health Certifying Agencies. • Completed first study guide for the registration exam for dietitians. • 32,497 RDs in CDR registry.
1981	• Granted Class A membership in the National Commission for Health Certifying Agencies.
1982	• Developed and distributed a separate registration identification card for dietitians. • Created a separate fund for CDR monies. • Revised eligibility requirements for writing the registration exam for dietitians. • Initiated plan for credentialing dietetic technicians. • Revised dietitian registration exam format to include situation sets, graphs, and multiple choice questions. • Institutionalized test equating to help ensure a consistent level of exam difficulty. • Established new passing standard for registration exam for dietitians. • Reported high correlation between performance on exam and performance on the job based on Predictive Validity Study.
1983	• Appointed Ethical Practices Task Force to develop an ethics code for credentialed practitioners. • Identified entry-level core knowledge for professional and technical levels.
1984	• Signed first registration eligibility reciprocity agreement with Canadian Dietetic Association.
1985	• Drafted minimum criteria and a model agreement for eligibility to use the registration examination for dietitians for licensure purpose. • Conducted role delineation studies, for entry-level dietitian and dietetic technician registration exams. • Revised continuing professional education guidelines for RDs. • 42,189 RDs in CDR registry.
1986	• Updated registration exam content specifications ensuring exams are practice application based rather than knowledge-based. • Implemented dietetic technician credentialing program. • Grandfathered 3,618 dietetic technicians.
1987	• Implemented new registration eligibility requirements for dietitians, requiring education programs to be accredited or approved by the Council on Education Division of Education Accreditation/Approval. • Administered the first Registration Examination for Dietetic Technicians, also marking the first practice-based examination offered by CDR. • Re-accredited by the National Commission for Certifying Agencies. • Revised Academy bylaws to add a dietetic technician, registered (DTR) position on CDR to ensure ongoing representation of the dietetic technician perspective.

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	TIMELINE: Commission on Dietetics Registration (CDR)—1969-2016.
1988	• Administered the first practice-based Registration Examination for Dietitians, using the 1985 role delineation study results. • Enacted continuing professional education recertification requirements for DTRs. • Established a centralized continuing education (CE) review and tracking service of state licensure boards. • Established new passing standard for the registration exam for dietitians. • Developed a CDR strategic plan.
1989	• Implemented a joint Academy/CDR *Code of Ethics for the Profession of Dietetics,* for the first time applicable to both members and all credentialed practitioners. • Entered into contract with The Pennsylvania State University's Office of Program Planning to develop self-assessment prototype.
1990	• First DTR elected to CDR. • Developed categories of CE to guide program sponsors in planning programs and practitioners in selecting appropriate activities. • Revised the test specifications (content outlines) for both the dietitian and dietetic technician exams, based on the results of the 1990 Role Delineation Study. • Initiated contract with the Pennsylvania State University's Office of Continuing Professional Education to develop self-assessment instruments for dietetics practitioners. • 48,701 RDs in CDR registry. • 4,193 DTRs in CDR registry.
1991	• Developed system to offer registration eligibility reciprocity to other countries whose requirements are comparable to those required by the CDR. • Reaccredited by the National Commission for Certifying Agencies for another 5-year term. • Convened a Critical Issues Task Force to address dietetics education and credentialing issues. • Evaluated and revised CDR Strategic plan. • Administered the first registration exams for dietitians and dietetic technicians based on the 1990 role delineation study. • Established new passing standards for registration exams for dietitians and dietetic technicians.
1992	• Released the first module, Management, of its *Self-assessment Series for Dietetics Professionals*. • Established guidelines for CE approval of culinary programs and fellowships. • Entered into a registration eligibility reciprocity agreement with the Dutch Association of Dieticians. • Contributed $200,000 in funding for the Academy's health care reform communications plan to promote the value of the RD and DTR in medical nutrition therapy. • Used results of 1990 delineation studies to develop first specialist certification exams in pediatric, renal, and metabolic nutrition. • Completed a report of the Critical Issues Task Force. • Initiated development of the Fellow of the American Dietetic Association (FADA) certification program. • Selected Applied Measurement Professionals, Inc. for development and administration of specialty board certification program. • Re-accredited by the National Commission for Certifying Agencies.
1993	• Administered first Specialty Board Certification exams in metabolic, pediatric, and renal nutrition. • Released the Nutrition Assessment and Evaluating Nutrition Care Plans modules of its Self-Assessment Series for Dietetics Professionals. • Selected CTB/McGraw-Hill Professional Assessment Services for development of Fellow certification. • Revised CDR strategic plan. • Signed registration eligibility reciprocity agreement with the Philippine Professional Regulation Commission. • Received regional and national awards from the National University for Continuing Education Association Self-Assessment Series for Dietetics Professionals.

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	TIMELINE: Commission on Dietetics Registration (CDR)—1969-2016.
1994	• Launched a searchable continuing professional education (CPE) database to assist practitioners in locating learning opportunities by topic, location, and date. • Administered the first Fellow of the American Dietetic Association certification exam. • Hosted Future Search Conference jointly with the Academy to identify new directions in practice and the educational requirements and credentialing strategies needed to support them. • Released the Nutrition Counseling and Nutrition Care Planning modules of its *Self-Assessment Series for Dietetics Professionals.* • Appointed a Board Certified Specialist to CDR. • Initiated transition to computer adaptive testing for entry-level dietitian and dietetic technician examinations. • Celebrated its 25th anniversary of CDR inception. • Received *Self-Assessment Series for Dietetic Professionals: Management Module* for the 1994 Programming Award from the National University Continuing Education Association, Division of Continuing Education for the Professions. • Developed joint certification collaboration guidelines.
1995	• Expanded administration of the Registration Examination for Dietetic Technicians to twice per year. • Initiated redesign of CPE recertification system. • Released the Nutrition Education Programs for Consumers and Nutrition Research modules of its *Self-Assessment Series for Dietetics Professionals.* • Developed and distributed *Partnership for Public Protection* portfolio to state licensure boards. • Funded production of video on Physical Assessment for Registered Dietitians. • Initiated computer-based registration eligibility process. • Initiated Practice Audit Project to identify new and emerging practice roles. • Filed registration eligibility requirements and reciprocity agreements with the US Trade Representative Office and World Trade Organization. • Initiated exploratory discussions on joint certification collaboration with American College of Sports Medicine. • 57,766 RDs in CDR registry. • 4,652 DTRs in CDR registry. • 263 Board Certified Renal and Pediatrics Specialists. • Appointed Alternative Pathways to Credentialing and Articulation Task Force.
1996	• Completed a Practice Audit (role delineation study) for entry-level dietitian and dietetic technician examination programs to include the first employer focus groups. • Updated test specifications for both dietitian and dietetic technician exams based on practice audit results. • Solicited RD and DTR input on first draft of redesigned recertification system. • Completed the Alternative Pathways and Articulation Taskforce report. • Developed a guide to the proposed recertification system. • Developed an evaluation plan for specialty board certification.
1997	• Discontinued Board Certification in Metabolic Nutrition. • Solicited feedback from credentialed practitioners on draft two of the recertification system redesign. • Re-accredited by the National Commission for Certifying Agencies. • Signed registration eligibility reciprocity agreement between CDR and the Republic of Ireland. • Collaborated with the Academy Marketing Team to fund Public Educational and Services Marketing of the RD and DTR. • Collaborated with the Academy Marketing Team to fund the development of RD/DTR Career Guidance materials. • Released online specialist self-assessment simulations. • Completed Board Certification as a Specialist in Renal, Pediatric 3-year evaluation. • Conducted new passing score study for the entry-level registration examinations. • Published updated study guides for entry-level registration examinations. • Completed Fellow of the American Dietetic Association 3-year evaluation.

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	TIMELINE: Commission on Dietetics Registration (CDR)—1969-2016.
1998	• Pilot-tested draft four of the Professional Development Portfolio (PDP). • Hosted Continuing Competency Summit attended by more than 200 representatives of regulatory boards from the United States and Canada. • Conducted practice audits for specialist board certification. • Revised CDR strategic plan. • Published *Computer Based Testing A New World of Options* educational diskette. • Funded evidence-based outcomes research.
1999	• Implemented computer-based registration examinations for dietitians and dietetic technicians. • Launched CDR website at www.cdrnet.org. • Updated specialist board certification test specifications based on practice audit results. • Discontinued registered, administratively inactive status. • CDR celebrates its 30th anniversary.
2000	• Implemented Continuing Professional Education Provider Accreditation program to recognize providers that meet quality standards. • Developed and publishes a guide for dietetics CE providers on how to develop learning needs assessment instruments. • Signed registration eligibility reciprocity agreement between CDR and United Kingdom. • Implemented PDP audit pilot-test. • Initiated development of first certificate of training in adult weight management program. • Completed 2000 Dietetics Practice Audit for entry-level dietitian and dietetic technician exams. • Completed specialist certification program evaluation. • 65,762 RDs on the registry. • 5,653 DTRs on the registry. • 664 Board Certified Renal and Pediatrics Specialists.
2001	• Implemented *Professional Development Portfolio* recertification system with the 15,000 credentialed practitioners scheduled to begin a new recertification cycle in June. • Conducted pilot-test of CDR's first certificate program, *Certificate of Training in Adult Weight Management.* • Updated test specifications for entry-level registration exams based on the results of the 2000 Practice Audit. • Initiated online *Board Certified Specialist Directory*. • Initiated Board Certified Specialist listserv. • Conducted pilot-test of *Certificate of Training in Multiple Choice Item Writing*.
2002	• Discontinued Fellow of the American Dietetic Association credential. • Specialist board certification exams transition to online delivery. • Conducted four Certificate of Training in Adult Weight Management programs. • Re-accredited by the National Commission for Certifying Agencies. • Implemented new test specifications for entry-level dietitian and dietetic registration exams. • Conducted new passing score study for entry-level examinations. • Published new study guides for entry-level dietitian and dietetic registration examinations. • Initiated online submission of learning plan to *Professional Development Portfolio* re-certificants. • Expanded administration of Specialist Board exams to twice per year. • Revised CDR strategic plan. • Conducted Renal and Pediatric Specialist Board certification evaluation.
2003	• Implemented Certificate of Training in Childhood and Adolescent Weight Management. • Specialist simulations transition to online delivery. • Conducted Board Certification as a Specialist in Pediatric and Renal Nutrition practice audit. • Implemented Retired Registered status. • Revised CDR strategic plan. • Conducted Renal and Pediatric Specialty certification evaluation.

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	TIMELINE: Commission on Dietetics Registration (CDR)—1969-2016.
2004	• Revised online system for registration eligibility application. • Updated content specifications for Board Certified Specialist in Pediatric and Renal nutrition exams. • Initiated hands-on Professional Development Portfolio "Help Center" during the Food & Nutrition Conference & Expo 2004. • Discontinued the Retired Registered status, effective June 1, 2005. • Celebrated CDR 35th anniversary. • Implemented online *Professional Development Portfolio* log reporting option. • Accepted CADE International Substantial Equivalency Process to meet registration eligibility requirements. • Discontinued registration eligibility reciprocity process, continuing to honor existing agreements. • Implemented new organizational identity program.
2005	• Conducted advanced-level Practice Audit. • Implemented online CDR credential verification system. • Conducted entry-level registration examination for dietitians and dietetic technicians practice audits. • 71,598 RDs on the registry. • 4,530 DTRs on the registry. • 703 Board Certified Renal and Pediatrics Specialists.
2006	• Implemented Board Certification as a Specialist in Sports Dietetics Certification Program. • Updated test specifications for entry-level dietitian and dietetic technician exams. • Conducted *Professional Development Portfolio* Recertification system evaluation. • Conducted Renal and Pediatric Nutrition Specialty Certification program evaluation. • Implemented online Continuing Professional Education Prior Approval process. • Implemented online Certificate of Training in Weight Management registration process. • Appointed a newly credentialed practitioner to CDR.
2007	• Implemented Board Certification as a Specialist in Gerontological Nutrition Certification Program. • Implement online Assess and Learn modules. • Re-accredited by the National Commission for Certifying Agencies. • Implemented Online Preceptor Certificate program. • Implemented new test specifications for entry level dietitian and dietetic technician registration exams. • Published new study guides for entry-level dietitian and dietetic technician registration exams. • Conducted new passing score study for entry-level dietitian and dietetic exams. • Conducted Levels of Dietetics Practice Audit study.
2008	• Implemented Board Certification as a Specialist in Oncology Nutrition Certification Program • Implemented Online Assess & Learn Module for Gerontological Nutrition. • Implemented enhancements to the Professional Development Portfolio identified during program evaluation. • Updated *Code of Ethics for the Profession of Dietetics*. • Updated CDR strategic plan.
2009	• Implemented Level 2 Certificate of Training in Adult Weight Management. • Implemented Pathway 3 an alternate pathway to DTR certification for individuals who complete a didactic program in dietetics or coordinated program in dietetics. • Conducted first webinar targeted to dietetics educators on computer-based entry-level registration examinations. • Established an Academy Foundation administered scholarship fund for registered dietitians enrolled in a doctoral degree program. • Established an Academy Foundation administered advanced practice residency fund for institutions establishing a dietetics residency program and RDs enrolled in an advanced practice residency program. • Established an Academy Foundation administered Diversity scholarship fund. • Celebrated CDR 40th anniversary.

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	TIMELINE: Commission on Dietetics Registration (CDR)—1969-2016.
2010	• Initiated Dietetics Workforce Demand Study. • Conducted entry-level registration examinations for dietitians and dietetic technicians Practice Audit. • 79,411 RDs on the registry. • 4,062 DTRs on the registry. • 453 Board Certified Specialists in Pediatric Nutrition. • 380 Board Certified Specialist in Renal Nutrition. • 258 Board Certified Specialists in Oncology Nutrition. • 238 Board Certified Specialists in Gerontological Nutrition. • 339 Board Certified Specialists in Sports Dietetics.
2011	• Completed Dietetics Workforce Demand study. • Implemented new Assess & Learn modules in Celiac Disease and the Nutrition Care Process. • Updated test specifications for the entry-level dietitian and dietetic technician registration exams. • Collaborated with Academy Marketing Team Coding and Coverage Team and Nutrition Services Coverage Team on the development and implementation of the *Value of an RD* campaign targeted to physicians, allied health professionals and third-party-payors. • Conducted dietetics practice audits for both the Pediatric and Renal specialty certification programs. • Initiated advanced practice in clinical nutrition practice audit. • Participated in Academy Board of Directors Alternative Pathways Workgroup. • Established Academy Foundation administered simulation grant, leadership grant and grassroots marketing grant programs. • Funded and collaborated with the Academy to conduct Branding Market Research. • Participated in the *Future Connections: Summit on Dietetics Education, Credentialing and Practice*. • Collaborated with the Academy of Nutrition and Dietetics Foundation on the development of criteria for CDR-funded advanced practice residency grants.
2012	• Published the work of the Dietetics Workforce Demand Study Task Force Report in the Academy *Journal* (2012;112[3 suppl]). • Implemented new CDR strategic plan. • Enacted an ethics education requirement for all recertifying RDs and DTRs. • Re-accredited by the National Commission for Certifying Agencies. • Conducted first item writing training webinars for educators. • Approved plan to move forward with the development of *Essential Practice Competencies* as an enhancement to the *Professional Development Portfolio* recertification system. • Collaborated with the Accreditation Council for Education in Nutrition and Dietetics on the implementation of Individualized Supervised Practice Pathways.
2013	• Implemented new credential option to allow use of the registered dietitian nutritionist (RDN) credential by RDs to underscore that all RDs are nutritionists. • Implemented redesigned CDR website. • Established graduate degree eligibility requirement for the registration examination for dietitians effective January 1, 2024. • Conducted DPD Program Graduate practice audit. • Conducted practice audit for new Advanced Practice in Clinical Nutrition certification. • Approved recommendation of the Advanced Practice in Clinical Nutrition practice audit Task force to develop new advanced practice certification. • Established RD-AP or RDN-AP as the new credential designation for the Advanced Practice in Clinical Nutrition certification. • Accreditation of Board Certified Specialist in Pediatric Nutrition and Board Certified Specialist in Sports Dietetics Certification Programs by National Commission for Certifying Agencies. • Selected Pearson Vue as the new vendor for the entry-level dietitian and dietetic technician registration exams development and administration.

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	TIMELINE: Commission on Dietetics Registration (CDR)—1969-2016.
	• Initiated development of an Interdisciplinary Specialist Certification in Obesity and Weight Management. • Conducted practice audit for new Interdisciplinary Specialist Certification in Obesity and Weight Management. • Established eligibility criteria for new Interdisciplinary Specialist Certification in Obesity and Weight Management. • Implemented enhanced CPE database for use by credentialed practitioners and CPE activity providers. • Reaffirmed continued administration of the dietetic technician, registered credential as long as it is financially feasible.
2014	• Established Board Certified Specialist in Obesity and Weight Management (CSOWM) as the credential designation for the new interdisciplinary certification. • Approved funding in the amount of $250,000 to support the development of the ANDHII outcomes registry database. • Implemented the option for DTRs to use the NDTR credential to reflect their nutrition practice role. • Conducted Validation Study — "*The Essential Practice Competencies for the CDR — Credentialed Nutrition and Dietetics Practitioners*." • Accreditation of Certified Specialist in Oncology Nutrition and Certified Specialist in Gerontological Nutrition by the National Commission for Certifying Agencies. • Initiated development of the Board Certified Specialist in Obesity and Weight Management certification as an interdisciplinary certification program. • Granted Canadian registered dietitians the option to take the certified specialist examinations. • Celebrated CDR 45th anniversary.
2015	• Implemented Essential Practice Competencies based Professional Development Portfolio recertification system. • Develops exam content outline based on practice audit results for new Advanced Practice in Clinical Nutrition certification. • Conducted practice audit for new Interdisciplinary Specialist Certification in Obesity and Weight Management. • Established eligibility criteria for new Interdisciplinary Specialist Certification in Obesity and Weight Management. • Conducted dietetics practice audit for the entry-level dietitian and dietetic technician certification programs. • Administered First Advanced Practice in Clinical Nutrition examination. • Developed examination content outline for new Interdisciplinary Specialist Certification in Obesity and Weight Management based on the results of the practice audit. • CDR reaffirmed January 1, 2024 implementation date for graduate degree dietitian registration eligibility requirement. • 94,473 RDs on the registry. • 5,535 DTRs on the registry. • 976 Board Certified Specialist in Pediatric Nutrition. • 649 Board Certified Specialist in Renal Nutrition. • 694 Board Certified in Oncology Nutrition. • 606 Board Certified Specialists in Gerontological Nutrition. • 790 Board Certified Specialists in Sports Dietetics.
2016	• Twenty-two RD-AP or RDN-AP certified. • Implemented new online Registration Eligibility Processing System for entry-level dietitian and dietetic technician certification programs. • Implemented Online Assessing Prior Learning course for dietetics educators. • Established PhD Faculty Fellowship administered by the Academy Foundation. • Implemented new quarterly e-newsletter *The CDR Connection*. • Appointed New Advanced Practice in Clinical Nutrition practitioner to CDR for June 1, 2016-May 31, 2017 program year. • Updated the examination content outlines for the entry-level registration examinations for dietitians and dietetic technicians based on practice audit results. • Conducted marketing needs assessment.