Leading the Vision into Future Practice

HOD Backgrounder

House of Delegates

Spring 2017

Introduction
For over a decade, the Academy has collectively worked towards a vision of future education and practice that will elevate the profession and its credentialed nutrition and dietetics practitioners. Some areas such as nutrition and dietetics education and practice competencies have already begun shifting to this vision, and other changes will be implemented over the next several years and decades. In addition, the Academy has just now entered its Second Century (1), further emphasizing the importance of elevating the nutrition and dietetics profession.

Our opportunity:
Choose a bold, purposeful way to continue this legacy with a new vision for the Academy’s Second Century — one that will not only elevate the profession and expand our reach, but do more to improve health around the world.

Mega Issue Question
How can credentialed nutrition and dietetics practitioners elevate the profession, expand opportunities, and enhance practice for the Second Century?

Meeting Objectives:
Delegates and Meeting Participants will be able to:
1. Share current efforts underway by the Academy and its organizational units to identify and meet the needs of the Second Century workforce.
2. Create a vision of a Second Century workplace.
3. Generate ideas to close the gap between current and future practice.
4. Recognize skills and professional development needed for current and future practitioners.
Leading the Vision into Future Practice

The Academy, Council on Future Practice (CFP), Accreditation Council for Education in Nutrition and Dietetics (ACEND), and Commission on Dietetic Registration (CDR) have each investigated the current and future landscape to determine education and practice opportunities. Many common themes emerged from their work. A quote from the 2013 Consensus Report (2) from the CFP stated these commonalities best, “If the nutrition and dietetics profession is not moving forward, it is being left behind.”

The Landscape

According to the Academy’s 2016 Needs Satisfaction Survey (3), half of working RDNs indicated their primary practice area as clinical practice, with 19% in inpatient, 22% in outpatient, and 9% in long term care. When asked to indicate all of the practice areas in which RDNs spend at least 20% of their time, the results were as follows [Exhibit 012]:

- 27% acute care, inpatient
- 11% acute care, outpatient
- 17% ambulatory/outpatient care
- 15% long term/extended care
- 7% rehab facility
- 14% community/public health program
- 9% government agency
- 6% non-profit agency
- 12% private practice
- 9% college/university faculty

Looking ahead, the implications document related to the Commission on Dietetic Registration’s Work Force Demand Study identified the aging population, health care reform, increasing prevalence of certain conditions (including obesity), and growth in the food industry as key factors affecting the demand for nutrition and dietetics practitioners (4). This excess demand will provide opportunities for non-registered practitioners (e.g., naturopathic physicians, athletic trainers, health coaches, health educators, and other health professionals) to provide nutrition and dietetics services. The task force study authors recommended proactive interventions that included: increasing the supply of RDNs by increasing the number of dietetic

**Question #1: What do we know about the current realities and evolving dynamics of our members, marketplace, industry, and profession that is relevant to this decision?**

[Image of a bar chart showing the distribution of RDNs by primary setting as follows:]
- Acute Care - Inpatient: 27%
- Acute Care - Outpatient: 11%
- Ambulatory/Outpatient Care: 17%
- Long Term/Extended Care: 15%
- Rehab Facility: 7%
- Community/Public Health Program: 14%
- Government Agency: 9%
- Non-Profit Agency: 6%
- Private Practice: 12%
- College/University Faculty: 9%
- + Others: 2%

*Base: those working in the field (multiple answers)*

Academy’s 2016 Needs Satisfaction Survey- ReadEx Research
internship positions, marketing new employment opportunities to potential nutrition, and dietetics students and creating professional growth opportunities (5).

In addition, the CFP Visioning Report 2017: A Preferred Path Forward for the Nutrition and Dietetics Profession (6) was recently released and consisted of input from Academy members, CDR credentialed nutrition and dietetics practitioners, Academy organizational units, CFP think tank members, and Academy external organization liaisons. The change drivers identified in the report are listed in the table below. Each change driver provides opportunities for the dietetics practitioner now and in the future. The recommendations within the report are not meant to be all-inclusive, but rather specific, actionable items that can be pursued in the next 10-15 years to advance the profession.

<table>
<thead>
<tr>
<th>Change drivers</th>
<th>Ranking %</th>
<th>Mean rating ± standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food Becomes Medicine in the Continuum of Health</td>
<td>77.6</td>
<td>3.68 ± 0.53</td>
</tr>
<tr>
<td>Aging Population Dramatically Impacts Society</td>
<td>69.9</td>
<td>3.61 ± 0.55</td>
</tr>
<tr>
<td>Accountability and Outcomes Documentation Become the Norm</td>
<td>57.4</td>
<td>3.43 ± 0.61</td>
</tr>
<tr>
<td>Population Health and Health Promotion Become Priorities</td>
<td>58.5</td>
<td>2.94 ± 0.77</td>
</tr>
<tr>
<td>Consumer Awareness of Food Choice Ramifications Increases</td>
<td>56.6</td>
<td>3.23 ± 0.68</td>
</tr>
<tr>
<td>Embracing America’s Diversity</td>
<td>42.6</td>
<td>3.42 ± 0.61</td>
</tr>
<tr>
<td>Technological Obsolescence Is Accelerating</td>
<td>40.6</td>
<td>3.49 ± 0.57</td>
</tr>
<tr>
<td>Creating Collaborative-Ready Health Professionals^d</td>
<td>47.0</td>
<td>3.37 ± 0.61</td>
</tr>
<tr>
<td>Tailored Health Care to Fit My Genes</td>
<td>37.7</td>
<td>3.11 ± 0.71</td>
</tr>
<tr>
<td>Simulations Stimulate Strong Skills</td>
<td>12.1</td>
<td>3.05 ± 0.65</td>
</tr>
</tbody>
</table>

^Change drivers are presented in descending order of mean ranking.
^Percent of respondents selecting the change driver in top 5.
^Mean ratings based on a scale from 1 (strongly disagree) to 4 (strongly agree).
^This change driver is in the bottom tier because of its low mean rating, even though its ranking percentage is higher than some middle-tier change drivers.
The House Leadership Team has been and will continue to utilize the change drivers for mega issues discussed by the House of Delegates. Work continues as a result of many of these mega issues and will drive us to our desired future. See examples below.

**Examples of Mega Issues with a Connection to the Change Drivers and Other Trends**

Recent [HOD Mega Issues](#) (7) have addressed many opportunities for the future including:

- Wellness and Prevention (2016)
- Technological Innovations (2016)
- Malnutrition (2015)
- Business and Management Skills (2014)
- Engaging Members in Research (2014)
- Nutrition Services Delivery and Payment (2013)
- Food and Nutrition Insecurity (2013)
- Public Health Nutrition (2012)
- Continuum of Professional Progression and Growth (2012)

**Education**

In 2012, ACEND began exploring the education needed to best prepare graduates for future practice in nutrition and dietetics. ACEND released the Expanded Standards Committee Background Report in July 2014 (8) reviewing three themes that emerged from their environmental scan, as it related to the future educational requirements for nutrition and dietetics practitioners:

1. Continuous high-speed advancements in healthcare, technology, medicine, and food systems warrant additional information and a higher level of education may better prepare nutrition and dietetics practitioners to meet the needs of the public.
2. There is a broadening and increasing complexity in public health nutrition, food safety, disease prevention, food production, and health promotion that may impact the practice of nutrition and dietetics.
3. Many health professions have identified differing skills levels needed by their practitioners in the marketplace. As a result many accrediting agencies have differentiated knowledge and skill requirements at bachelor’s and graduate levels.

ACEND proposed a model for future nutrition and dietetics education with new graduate level standards to prepare generalist and specialist dietitians for these future roles in their *Rationale Document* (9). The proposed model also includes new associate and bachelor’s level standards to better prepare graduates for emerging roles in community nutrition and health, wellness, business and industry, and management. Figure 2 on the next page depicts the recommended future model for education in nutrition and dietetics. The model includes development of programs starting at the high school level and continuing through the doctoral degree level.
Integrated Knowledge and Experiential Learning

**High School Level**

**Community Nutrition and Health Worker**
*(visioned for future exploration)*

Program will contain knowledge and experiential learning requirements in one program; program will prepare students for support roles in community health.

**Associate’s Level**

**Nutrition Health Associate**

Program will include integrated knowledge and experiential learning requirements in one program; program will focus on topics of general nutrition, health, wellness, cultural competence and communication.

**Bachelor’s Level**

**Food and Nutrition Practitioner**

Program will include integrated knowledge and experiential learning requirements in one program; program will include coursework in sciences and dietetics core to prepare graduates for identified careers; may provide prerequisite preparation for graduate study, and will meet nutrition and dietetic technician registration examination eligibility.

**Master’s Level**

**Generalist Dietitian Nutritionist**

Program will include integrated knowledge and experiential learning requirements in one program; program will include preparation in client clinical care; team work, communication, research, professional practice; community and population health; leadership, management, food, and foodservice skills necessary to function as a generalist dietitian nutritionist and will meet dietitian nutritionist registration examination eligibility.

**Doctoral Level**

**Specialist Dietitian Nutritionist**
*(visioned for future exploration)*

Program will include integrated knowledge and experiential learning requirements in one program; program will provide preparation for specialized practice.

Figure 2. Proposed model for future education in nutrition and dietetics

*Current focus is on the Associate’s to Master’s level, but other areas will be determined at a later time.*
In 2016, ACEND released a first draft of standards and opened a public comment period for the future education model associate, bachelor’s and master’s degree program. The public comments were reviewed; and in February 2017 ACEND released a revised set of standards based on the input. They now seek public comment on the most recently released draft of the *Future Education Model Accreditation Standards for Associate, Bachelor and Master Degree Programs in Nutrition and Dietetics*. Updates and answers to questions are communicated via ACEND’s Monthly Standards Updates and Town Hall meetings (10).

Below is the guiding vision that ACEND has used in the development of the proposed competencies (9):

<table>
<thead>
<tr>
<th>Future master’s degree prepared nutrition and dietetics practitioner</th>
<th>Future bachelor’s degree prepared nutrition and dietetics practitioner</th>
<th>Future associate degree prepared nutrition and dietetics practitioner</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Credential available:</strong> Registered Dietitian Nutritionist (RDN)</td>
<td><strong>Credential available:</strong> Nutrition and Dietetics Technician, Registered (NDTR)</td>
<td></td>
</tr>
<tr>
<td>Facilitates inter and intra professional teamwork and collaboration</td>
<td>Manages the production, distribution and service of food in foodservice operations</td>
<td>Collects data and assists with in home screening regarding changes in: behaviors, nutrition, physical activity, substance use, medication adherence, and other issues as related to the established care plans</td>
</tr>
<tr>
<td>Develops and implements community, population, and global nutrition programs</td>
<td>Develops evidence-informed nutrition communications</td>
<td>Promotes access to community resources for clients</td>
</tr>
<tr>
<td>Reviews, evaluates, and conducts research</td>
<td>Assists clients with meal planning and conducts cooking classes</td>
<td>Assists clients with food label reading and meal preparation tips</td>
</tr>
<tr>
<td>Provides Medical Nutrition Therapy counseling that results in behavior change</td>
<td>Assists the RDN with client/patient screening, nutrition intervention, and client/patient education</td>
<td>Assists with community events such as health fairs and farmer’s markets</td>
</tr>
<tr>
<td>Demonstrates leadership to guide practice</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Assumes administrative, leadership, and entrepreneurial positions in nutrition and dietetics</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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**Credentialing**

CDR changed the degree requirement for dietitian registration eligibility, from a baccalaureate degree to a master’s degree, effective January 1, 2024 (11). This action was based on the recommendations of the Council on Future Practice Visioning Report released in fall 2012. CDR calculated a five to six year window for those entering a Didactic Program in Dietetics (DPD) in 2014 to complete the DPD, followed by two years to find and complete a supervised practice program, and then two years as a cushion for any unforeseen circumstances that would interfere with submission of the registration eligibility application by January 1, 2024.

CDR also launched the Essential Practice Competencies for credentialed nutrition and dietetics practitioners. In June 2015 the new CDR registrants began using the Essential Practice Competencies (12); and those recertifying on June 1, 2016 also began the new process. By the 2020 cycle, all credentialed nutrition and dietetics practitioners will be on the competency-based system. There are 14 spheres, 55 practice competencies for RDNs (50 for NDTRs), and 352 performance indicators for RDNs (271 performance indicators for NDTRs). The Essential Practice Competencies are:

- Broad enough to encompass the range of activities within the profession (e.g., clinical care, management, food service, research, education, public health, consultation, etc.) and to recognize that RDNs and NDTRs assume many unique roles (e.g., marketing for a food manufacturer, informatics for a health system, etc.).
- Descriptive of the different practice roles between the RDN and NDTR credentials.
- Applicable to all credentialed nutrition and dietetics practitioners.

These essential competencies are just one step in preparing the profession for the changing landscape, trends and other forces driving practice.

**Question #2: What do we know about the needs, wants and expectations of members, customers and other stakeholders relevant to this decision?**

**Realities**

Over the years, credentialed nutrition and dietetics practitioners have expressed concern about the three Rs- respect, recognition, and rewards. This theme has remained consistent since the 1990’s (2, 13). In addition one of the themes in a supplement from the Workforce Demand Survey Study (14) noted, “Too many in the profession see dietetics as a job rather than a profession and are not ready to step up to the challenge of change.”

At the same time, many practitioners are also seeking opportunities to advance practice and expand services. Many active projects and initiatives support this need, such as CDR’s Advanced Practice Credential in Clinical Nutrition, CDR’s Certificate of Training Programs in Weight Management, and the Academy’s eleven online Certificate of Training Programs in various...
areas of practice (levels 1 and 2 for advanced growth). Successful advocacy efforts by the Academy have created opportunities for therapeutic diet order writing privileges in both hospital and long-term care settings. In addition, the Academy has been offering hands-on training workshops on Nutrition Focused Physical Examination (NFPE). Other areas for continued expansion include integration of RDNs and nutrition services in newer models of health care delivery and payment, which include opportunities to tap into the full scope of practice of the RDN. Furthermore, Dietetic Practice Groups (DPGs) and Member Interest Groups (MIGs) offer opportunities for continuing education, sharing ideas, networking, and building relationships with colleagues.

**Stakeholders**

**ACEND’s Environmental Scan with Stakeholders**

- There is an increased focus on disease prevention and integrative healthcare, and the need for more knowledge in emerging areas such as genomics, telehealth, behavioral counseling, diet order writing, and informatics.
- This work requires that health care professionals work more interprofessionally.
- Employers indicated the need for improved communication skills in nutrition and dietetics practitioners and an improved ability to understand the patient’s community and cultural ecosystem.
- Practitioners need to be able to read and apply scientific knowledge and interpret this knowledge for the public. Employers also expressed a desire for stronger organizational leadership, project management, communication, patient assessment, and practice skills.
- Many of the stakeholders identified gaps in current competencies in areas of research, communication, leadership/management skills, cultural care, interprofessional work, basic food and culinary preparation, and sustainability.
- Employers indicated that more time might be needed in the preparation of future nutrition and dietetics practitioners to assure application of knowledge and demonstration of skills needed for effective practice.
- Stakeholders identified the importance of associate and bachelor’s level prepared graduates for roles in community health, wellness, and management.
- Employers identified the need for preparing undergraduates with transferable skills in leadership, business and management, and expressed the need for faculty prepared at the doctoral level.

ACEND interviewed stakeholders representing healthcare administration (pharmacy, nursing), deans of allied health colleges, employers of less traditional roles (communications, marketing, and management), physicians, educators in allied health graduate programs, and researchers...
regarding their needs with employment of current and future practitioners (9). The table above on page 8 shows key themes that emerged from these interviews.

**Opportunities**
The Academy is entering its Second Century and there are many exciting opportunities to advance the profession. Six Second Century opportunity categories have been identified (15). The potential is great for the profession heading into the Second Century and opens the door for further stakeholder collaboration.

**Opportunities in Six Categories**

**FOOD AND NUTRITION SECURITY**
Ensure all people have reliable access to culturally appropriate, nutrient-dense food and clean water – now and in the future – by building resilient food systems and prioritizing actions to prevent and divert wasted food throughout the value chain.

**RESEARCH AND STANDARDS**
Implement models of trusted, public-private collaboration to support high-quality nutrition research, metrics and standards creation and open-access platforms for curating research and reporting outcomes.

**ENVIRONMENT, BEHAVIOR AND CHOICE**
Create a culture and environment that support health and wellness through relevant and appealing solutions for all places where people spend their time – home, work, schools and communities.

**GLOBAL WORKFORCE CAPACITY**
Grow the number of trained nutrition professionals and dietitians globally and embed nutrition knowledge broadly to increase nutrition capacity and reach global health goals.

**PREVENTION AND HEALTH CARE**
Improve health outcomes and decrease health disparities by accelerating the shift to a preventive health care model and using new technologies to individualize nutrition care.

**INVESTMENT**
Accelerate progress and explore collaborations to drive investment in nutrition outcomes.

Moving the educational preparation of the RDN to the master’s degree level will help elevate the profession among our allied health professional colleagues, whose professions have already elevated entry-level educational standards to either a master’s degree or practice doctorate (16). Advancing the education level should also increase the profession’s ability to effectively advocate for coverage and reimbursement for nutrition services provided by RDNs, and for appropriate positioning of RDNs on the health care team (2).
The CFP Visioning Report 2017 also looked at the future needs of society and the profession. Highlights from the report are shown below. Credentialed nutrition and dietetics practitioners can help fulfill these changing needs (5).

<table>
<thead>
<tr>
<th>Society’s Future Needs and Changes</th>
<th>Client/Patient Needs, Preferences and Health Education</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographics</strong></td>
<td>Client/Patient Needs, Preferences and Health Education</td>
</tr>
<tr>
<td>• Diversity</td>
<td>• Lifestyles</td>
</tr>
<tr>
<td>• Generations</td>
<td>• Cultural values</td>
</tr>
<tr>
<td>• Geographic distribution</td>
<td>• Consumer trends</td>
</tr>
<tr>
<td>• Financial and political disparities</td>
<td>• Health disparities</td>
</tr>
<tr>
<td>• Education levels</td>
<td>• Health education</td>
</tr>
<tr>
<td></td>
<td>• Health and nutrition literacy</td>
</tr>
<tr>
<td></td>
<td>• Personal resources (income)</td>
</tr>
<tr>
<td><strong>Food and Nutrition Systems and Sustainability</strong></td>
<td>Healthcare</td>
</tr>
<tr>
<td>• Food industry</td>
<td>• Healthcare reform</td>
</tr>
<tr>
<td>• Food systems management</td>
<td>• Coordinated care</td>
</tr>
<tr>
<td>• Food and nutrition security</td>
<td>• Healthcare delivery systems and models including</td>
</tr>
<tr>
<td>• Food safety</td>
<td>long-term care and acute care facilities</td>
</tr>
<tr>
<td>• Food-related environmental sustainability</td>
<td>• Alternative medicine/health</td>
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<tr>
<td>• Agricultural systems</td>
<td>• Access to primary care</td>
</tr>
<tr>
<td></td>
<td>• Access to RDNs and NDTRs</td>
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<tr>
<td></td>
<td>• Quality care and outcomes</td>
</tr>
<tr>
<td><strong>Public Health, Policies and Priorities</strong></td>
<td>Economics/Market Forces</td>
</tr>
<tr>
<td>• Obesity</td>
<td>• Economic outlook</td>
</tr>
<tr>
<td>• Nutrition and physical activity across the lifespan</td>
<td>• General employment trends</td>
</tr>
<tr>
<td>• Chronic disease management</td>
<td>• Wages</td>
</tr>
<tr>
<td>• Health promotion and wellness</td>
<td>• Areas for job growth</td>
</tr>
<tr>
<td>• Changing the environment/infrastructure to promote healthy lifestyle</td>
<td>• Delivery and payment for nutrition services</td>
</tr>
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<td></td>
<td>• Public reporting of measurable results for nutrition service</td>
</tr>
<tr>
<td><strong>Advances in Medicine, Science and Technology</strong></td>
<td>Global Context</td>
</tr>
<tr>
<td>• Genetics, genomics</td>
<td>• Nutrition and dietetics practices in other countries</td>
</tr>
<tr>
<td>• Behavioral science</td>
<td>• Migration/immigration and global workforce</td>
</tr>
<tr>
<td>• Information communication technologies</td>
<td>• Global professional collaboration</td>
</tr>
<tr>
<td>• Mobile connectivity</td>
<td>• Trends in population health and agriculture</td>
</tr>
<tr>
<td>• Electronic health records</td>
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<table>
<thead>
<tr>
<th><strong>Education/Professional Development</strong></th>
<th><strong>Work and Workplaces</strong></th>
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<tbody>
<tr>
<td>• Integrated didactic education and supervised practice</td>
<td>• Practice roles</td>
</tr>
<tr>
<td>• Knowledge and continuing competence</td>
<td>• Business models</td>
</tr>
<tr>
<td>• Education programs and curriculum</td>
<td>• Emerging opportunities</td>
</tr>
<tr>
<td>• Learning technologies and platforms</td>
<td>• Competitive providers of nutrition and dietetics services</td>
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<td></td>
<td>• Work and family balance</td>
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<td></td>
<td>• Salaries and benefits</td>
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<table>
<thead>
<tr>
<th><strong>Workforce Projections</strong></th>
<th><strong>Practice Requirements</strong></th>
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</thead>
<tbody>
<tr>
<td>• Supply and demand</td>
<td>• Evidence-based practice</td>
</tr>
<tr>
<td>• Mobility and adaptability</td>
<td>• Business and entrepreneurial skills</td>
</tr>
<tr>
<td>• Workplace settings and focus areas</td>
<td>• Technology use</td>
</tr>
<tr>
<td>• Staffing models and ratios</td>
<td>• Education, counseling and behavior change</td>
</tr>
<tr>
<td>• Retention of RDNs, NDTRs and dietetics students/interns</td>
<td>• Cultural competency</td>
</tr>
<tr>
<td>• Diversity of the workforce</td>
<td>• Interprofessional training and proficiency</td>
</tr>
<tr>
<td></td>
<td>• Practice efficiency methods</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Career Advancement and Leadership</strong></th>
<th><strong>Advocacy, Credentialing and Licensure</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Reward and recognition</td>
<td>• Advocating for the profession</td>
</tr>
<tr>
<td>• Leadership and management</td>
<td>• Patterns in credentialing in nutrition and dietetics</td>
</tr>
<tr>
<td>• Drive and motivation</td>
<td>• Competing and related credentials</td>
</tr>
<tr>
<td>• Mentoring new practitioners</td>
<td></td>
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<thead>
<tr>
<th><strong>Translating Evidence-Based Research into Practice and Policy</strong></th>
<th><strong>Values and Ethics</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Research on effectiveness of nutrition services</td>
<td>• Evidence-based nutrition</td>
</tr>
<tr>
<td>• Opportunities for practitioner/researcher collaborations</td>
<td>• Social responsibility</td>
</tr>
<tr>
<td>• New developments in nutrition and health sciences</td>
<td>• Personal integrity and professionalism</td>
</tr>
<tr>
<td>• Informatics and data analytics</td>
<td></td>
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<tr>
<td>• Translating research into policy</td>
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</tbody>
</table>

Figure 2. Ten priority change drivers and their associated trends for the Council on Future Practice’s 2014-2017 Visioning Cycle

**In July of 2014, the CFP utilized the scanning framework to identify and prioritize the following five shaded categories for the 2014-2017 visioning cycle.**

Before moving on to the next section, please stop and read the following documents to set the stage for the strategic position and capacity section.

- **Appendix A:** CFP’s Visioning Report 2017: A Preferred Path Forward for the Nutrition and Dietetics Profession
As we head into the Second Century and look to advance with multiple levels of practice, there are opportunities to expand the workforce not only in the U.S., but also globally. The Workforce Demand Study noted the demand for nutrition and dietetics services was predicted to increase due to health care reform and the expansion of health care services to an additional 30 million people (4). The report suggested that approximately 75% of the demand for dietetics services would be met by the year 2020, which would leave 25% as an unmet need. Credentialed dietetics practitioners’ characteristics in 2010 included an average age of 44 years, 96% were women and about 55% worked in clinical dietetics. The net supply of CDR credentialed dietetics practitioners was projected to grow by 1.1% annually (3). The implications report also indicated that the public will have more options for nutritional advice from the rise in homeopathy and other sources of alternative (natural) medicine. Therefore, without an adequate supply of credentialed nutrition and dietetics practitioners, the competitive space for RDNs and NDTRs may be challenged (4). Current discussions within the national political arena around changes to the Affordable Care Act may impact these previous projections in ways we cannot yet anticipate. Either way, we know the public has a heightened interest in nutrition and health.

There is also a shortage of health workers globally, while demand for health services jobs are expected to increase. The workforce provides a clear pathway to improved food, nutrition and overall health for those who benefit from access to nutrition and health services (17). The report from the High-Level Commission on Health Employment and Economic Growth also identified a 9 to 1 return on investment in the health sector workforce (17).

Additionally, there is growing global momentum for collaborative solutions in food and nutrition. Last year, the United Nations Sustainable Development Goals (SDGs) were launched, with 17 transformative targets for all countries to work toward (18). Food and nutrition is at the top of the agenda. Goal #2 is to end hunger and all forms of malnutrition. A rapid path to supporting the SDG #2, the Decade of Action on Nutrition, and addressing the need for global health workers is by creating a pathway for RDNs, NDTRs, dietetic interns, and undergraduate dietetics majors to fill the gap. RDNs are the most highly trained nutrition practitioners and represent a workforce of 100,000 credentialed nutrition and dietetics practitioners. Yet, they
are underrepresented in careers in global health, resulting in an unfulfilled potential to accelerate progress in improving nutritional status of all people around the world.

The Academy has built an organizational infrastructure to help advance the profession. This infrastructure includes:

- a highly respected research arm (including the Evidence Analysis Library, Dietetics Practice Based Research Network, ANDHII, position and practice papers, and the electronic Nutrition Care Process Terminology used by 15 countries);
- a lifelong learning and professional development arm, which hosts the Academy’s annual scientific Food and Nutrition Conference and Expo, offers over 400 continuing professional education credits per year, and manages nearly 30 specialty dietetics practice groups; and
- an advocacy arm, which influences food and nutrition public policy at all levels of government.

The Academy’s infrastructure also includes the credentialing arm of the profession, the Commission on Dietetic Registration, and the accrediting agency for education programs preparing students for careers as RDNs and NDTRs, the Accreditation Council for Education in Nutrition and Dietetics (ACEND), which accredits 575 nutrition and dietetics programs in the U.S. and five international programs. In addition, the Academy’s Foundation is the only charitable organization devoted exclusively to promoting nutrition and dietetics, funding health and nutrition research and improving the health of communities through public nutrition education programs.
As a part of its Second Century initiative and centennial celebrations, the Academy of Nutrition and Dietetics has established a new vision, mission, principles and strategic direction that will expand the influence and reach of the Academy and the nutrition and dietetics profession.

**Academy of Nutrition and Dietetics New Mission, Vision and Principles**

**New Vision**
*A world where all people thrive through the transformative power of food and nutrition*

**New Mission**
*Accelerate improvements in global health and well-being through food and nutrition*

**New Principles**
*The Academy of Nutrition and Dietetics and our members:*
- *Integrate research, professional development and practice to stimulate innovation and discovery*
- *Collaborate to solve the greatest food and nutrition challenges now and in the future*
- *Focus on system-wide impact across the food, wellness and health care sectors*
- *Have a global impact in eliminating all forms of malnutrition*
- *Amplify the contribution of nutrition practitioners and expand workforce capacity and capability.*

As the Academy and the Academy Foundation move into the Second Century, a Nutrition Impact Summit was held to focus on increasing collaboration among key stakeholders and identifying opportunities to improve the global health trajectory. The Summit brought together 170 thought leaders, experts, innovators, and strategic thinkers across the food, wellness, and health care sectors to answer the question, "How might we accelerate progress toward good health and well-being for all people through collaboration across food, wellness and health care systems?" (19). A key focus of this summit was on increasing collaboration among key stakeholders and identifying opportunities to improve the global health trajectory.
The core tenets of this proposed new vision:

- Accelerating progress through technology
- Revealing evidence through gold-standard research
- Empowering consumers through education and creating an environment where the healthy choice is the easy choice
- Advocating for stronger policies
- Optimizing wellness through health care and customized nutrition solutions
- Fueling innovation through investment

Many opportunity areas covered during the Nutrition Impact Summit correspond with items from the 2017 Visioning Report and ACEND rationale document, setting the stage for advancing the profession. RDNs and NDTRs can help meet practice needs across the spectrum in the U.S. and across the globe.
Implications

Scope of Practice for the Profession of Nutrition and Dietetics
The scope of practice for the profession of nutrition and dietetics incorporates education, credentials, practice standards, practice management and advancement, and practice resources (20). Scope of practice in nutrition and dietetics encompasses the range of roles, activities, and regulations within which nutrition and dietetics practitioners perform. For credentialed nutrition and dietetics practitioners, scope of practice is typically established within the practice act and interpreted and controlled by the agency or board that regulates the practice of the profession in a given state (21). The Scope of Practice for the RDN reviews the RDN’s education and training in food and nutrition and summarizes the responsibilities for nutrition-related services. RDNs are integral leaders of interdisciplinary teams in health care, foodservice systems, education, and other practice environments. They provide services in varied settings, including health care, business and industry, communities and public health systems, schools, colleges and universities, the military, government, research, fitness centers, private practice, and communications (22). The Scope of Practice for the NDTR describes the NDTR’s education and training in food and nutrition and outlines their roles in providing services and activities. NDTRs are integral members of the nutrition care and foodservice management teams. NDTRs work in employment settings such as health care, business and industry, communities and public health systems, schools, fitness centers, and research (23).

Standards of Practice (SOP) and Standards of Professional Performance (SOPP)
Standards of Practice in Nutrition Care are authoritative statements that describe practice and responsibilities for which RDNs and NDTRs are accountable using four separate standards. Each standard demonstrates quality indicators through nutrition assessment, nutrition diagnosis (problem identification), nutrition intervention (planning, implementation) and outcomes monitoring and evaluation (24, 25). The Standards of Professional Performance includes standards for six domains of professionalism: Quality in Practice, Competence and Accountability, Provision of Services, Application of Research, Communication and Application of Knowledge, and Utilization and Management of Resources. For RDNs in specialty practice, the SOPs and SOPPs in the 17 focus areas (i.e., diabetes, oncology, sports, pediatrics, etc.) further illustrate quality indicators within competent, proficient and expert levels of practice (26).
**Future Considerations**

With the education model shifting and implementation of the newly updated education knowledge standards and corresponding competencies, the scopes of practice, standards of practice, and standards of professional performance will be evaluated after workforce uptake and adoption of the three levels of nutrition and dietetics practitioners. The Academy’s Quality Management Committee will review employers’ identified and initiated job position specifications that meet their market demand.

The helix graph (see right) will also expand to include the third level of education and parallel pathway as applicable (27).

**Competency, Professional Knowledge and Continuing Education**

According to Principle 14 of the Academy of Nutrition and Dietetics and Commission on Dietetic Registration (CDR) Code of Ethics, “The dietetics practitioner assumes a lifelong responsibility and accountability for personal competence in practice, consistent with accepted professional standards, continually striving to increase professional knowledge and skills and to apply them in practice.” (24) The Essential Practice Competencies are already applicable to all credentialed nutrition and dietetics practitioners. However, continuing education opportunities will need to be geared towards the future types of practitioners, as well as multiple levels of practice (competent, proficient and expert). Credentialed nutrition and dietetics practitioners will need continuing education opportunities that match their practice level and allow for growth across their career to ensure they are abiding by the Code of Ethics.
Professional Regulations
The purpose of states licensing professionals is for public protection by ensuring only qualified individuals are engaged in practices that could impact the health or safety of citizens. Currently 47 states either require dietitians to be licensed, license and regulate the practice of nutrition and dietetics without requiring one be licensed to practice, or regulate the use of dietetics and nutrition-related titles. State dietetics and nutrition licensing boards or state departments of professional regulation or health are responsible for developing and implementing regulations governing professional qualification and practice. Each state defines the legal scope of practice for licensed dietitian nutritionists or licensed dietitians (i.e., what licensees are legally permitted to do) and determines the requisite educational preparation and experience required to be recognized as a licensed practitioner in the state.

A non-RDN bachelor’s level practitioner who passes CDR’s examination for registered dietitians is generally eligible for state recognition and oversight as licensed dietitian nutritionists (or similar titles). This means that non-RDN CDR credentialed nutrition and dietetics practitioners with a bachelor’s level education will hold the same legal scope of practice as a licensed RDN unless the states and the federal government are persuaded to adopt the Academy’s recommendations for concomitant amendments to scores of statutes and regulations. The Academy continues to work with our affiliates and numerous interested stakeholders to lay the foundation for changes to state licensure laws to improve the practice of nutrition and dietetics around such issues as therapeutic diet ordering, telehealth, and the minimum academic requirements necessary for licensure.

Credentialing by Third Party Payers
There will be continued emphasis on expanding consumer access and coverage for Medical Nutrition Therapy (MNT) and the broad range of services provided by credentialed food and nutrition practitioners, while working to achieve competitive reimbursement for quality nutrition services. Under the fee-for-service payment structure, provider credentialing is tied to professional credentialing requirements (such as those of CDR) and state licensure. For example, Section 1861[42 U.S.C. 1395x] of the Social Security Act defines the qualified provider of Medical Nutrition Therapy services under Medicare Part B as follows: (v)(1) The term “medical nutrition therapy services” means nutritional diagnostic, therapy, and counseling services for the purpose of disease management which are furnished by a registered dietitian or nutrition professional (as defined in paragraph (2)) pursuant to a referral by a physician (as defined in subsection (r)(1)).

(2) Subject to paragraph (3), the term “registered dietitian or nutrition professional” means an individual who—

(A) holds a baccalaureate or higher degree granted by a regionally accredited college or university in the United States (or an equivalent foreign degree) with completion of the academic requirements of a program in nutrition or dietetics, as

Leading the Vision into Future Practice
accredited by an appropriate national accreditation organization recognized by the Secretary for this purpose;
(B) has completed at least 900 hours of supervised dietetics practice under the supervision of a registered dietitian or nutrition professional; and
(C)(i) is licensed or certified as a dietitian or nutrition professional by the State in which the services are performed; or
   (ii) in the case of an individual in a State that does not provide for such licensure or certification, meets such other criteria as the Secretary establishes.
(3) Subparagraphs (A) and (B) of paragraph (2) shall not apply in the case of an individual who, as of the date of the enactment of this subsection, is licensed or certified as a dietitian or nutrition professional by the State in which medical nutrition therapy services are performed.

Without a change in state licensure laws to align the RDN credential with a master’s degree or higher, NDTRs, who in the future will hold a bachelor’s degree, might be deemed to meet the definition of “nutrition professional” for the purposes of Medicare enrollment and the provision of MNT services to Medicare beneficiaries. Similar implications may apply for state Medicaid programs and private payers. It should be noted that this change is not guaranteed and could lead to disastrous and costly unintended consequences as licensure laws and federal statutes and regulations are opened up. It will be important to align laws, regulations, and third party payer credentialing policies with the education and credentialing requirements and scope of practice of the future credentialed nutrition and dietetics practitioners, once they are actually defined.

The Academy has an opportunity to accelerate improvements in nutrition and health around the world, by building on our strengths and collaborating with other leaders.

Conclusion:
The dietetics profession is propelling forward with the advancements of education and practice; and while some changes may take decades to implement, the time to advance practice is now. The changes will affect every area of the profession. Credentialed nutrition and dietetics practitioners must be prepared to advance skills and elevate practice to compete in the Second Century workforce.
REFERENCES:


25. The Academy Quality Management Committee and Scope of Practice Subcommittee of the Quality Management Committee. Academy of Nutrition and Dietetics: Revised...


Visioning Report 2017: A Preferred Path Forward for the Nutrition and Dietetics Profession

Jana R. Kicklighter, PhD, RDN, LD, FAND; Becky Dorner, RDN, LD, FAND; Anne Marie Hunter, PhD, RDN, LD, FADA, FAND; Marcy Kyle, RDN, LD, CDE, FAND; Melissa Pflugh Prescott, PhD, RDN; Susan Roberts, MS, RDN, LD, CNSC; Bonnie Spear, PhD, RDN, FAND; Rosa K. Hand, MS, RDN, LD; Cecily Byrne, MS, RDN, LDN

The Council on Future Practice (CFP) was created as a permanent organized body within the Academy of Nutrition and Dietetics (Academy) responsible for formalizing an ongoing visioning process to define future nutrition and dietetics practice at all levels, and to identify the educational and credentialing needs required for future practitioners and their development.

The CFP is an Academy committee that collaborates with the Accreditation Council for Education in Nutrition and Dietetics (ACEND), the Commission on Dietetic Registration (CDR), and the Nutrition and Dietetics Educators and Preceptors to project future practice needs for the profession of nutrition and dietetics. Future practice, accreditation, credentialing, and education represent the four critical organizational units and segments necessary to produce new practitioners and assist experienced practitioners in advancing their careers.

One of the functions of the CFP is to ensure the viability and relevance of the profession of nutrition and dietetics by engaging in a visioning process to identify the preferred future of the profession. The Council developed a standardized process and guidelines for visioning and futures thinking in 2014, based on a workshop conducted for members of the CFP by futurist Marsha Rhea from Signature i, LLC. The current visioning process focuses on a 3-year program of work (2014-2017) and began with the use of a scanning framework comprising 16 categories reflective of the society’s and the profession’s future needs and changes.

METHODOLOGY

In July of 2014, the CFP utilized the scanning framework to identify and prioritize the following five categories for the 2014-2017 visioning cycle (see Figure 1):

- Translating Evidence-Based Research into Practice and Policy;
- Food and Nutrition Systems and Sustainability;
- Workforce Projections;
- Education/Professional Development; and
- Economics/Market Forces.

A Visioning Process Workgroup of the CFP was appointed in 2014 to lead the CFP’s efforts in the Visioning Process. The seven-member Workgroup included both current and past members of the Council. The Workgroup identified a preliminary list of change drivers and trends related to the five prioritized scanning framework categories, based on CDR’s Workforce Demand Study, Future Changes Driving Dietetics Workforce Supply and Demand: Future Scan 2012-2022, and ACEND’s Expanded Standards Committee Background Report. Other Academy units conducting their own visioning also shared their reference lists with the Workgroup, including the Foundation’s Future of Food Initiative and ACEND’s Rationale for Future Education Preparation of Nutrition and Dietetics Practitioners. These lists were reviewed for pertinent references. Also, a systematic review of resources published since 2010 was conducted by the Academy’s Knowledge Center based on the five priority categories. Five databases, including Science Direct, Taylor, Cochrane, Ovid, and Web of Science, were searched using general key words and phrases (eg, wellness and health promotion and registered dietitians; employment trends and registered dietitians; trends in population health and agriculture and registered dietitians) to identify references pertaining to the five prioritized scanning framework categories. Additional references were identified by reviewing the reference lists of pertinent articles and resources resulting from the systematic review. Finally, the Workgroup reviewed resources available through the World Future Society and selected several references related to the priority categories for review. All of these combined search strategies resulted in a total of 357 references, both internal and external, to the profession of nutrition and dietetics. References identified as pertinent to the five prioritized scanning framework categories by the Visioning Process...
Appendix A

Workgroup were reviewed and analyzed by Workgroup members and analysts from the Academy’s Evidence Analysis Library. Reviewers identified whether each reference supported any of the preliminary change drivers and trends and noted any new change drivers and trends related to the five priority categories not previously identified. Of the 357 references reviewed, 218 references were used in the development of the Change Drivers and Trends Driving the Profession: A Prelude to the Visioning Report 2017 and the recommendations for the Visioning Report 2017.

SURVEY #1: PRIORITY SCANNING FRAMEWORK CATEGORIES AND TRENDS SURVEY OF CFP THINK TANK MEMBERS AND EXTERNAL ACADEMY ALLIANCE ORGANIZATIONS

Based on the CFP’s standardized process and guidelines for visioning and futures thinking, the Workgroup surveyed members of the CFP’s think tank (n=49) and individuals representing external Academy alliance organizations (n=15) in February 2015 to seek their input on priority categories and trends. Individuals identified the top 5 categories from the 16 scanning framework categories and related trends they believed would have the most impact on the future of the nutrition and dietetics profession in 10 to 15 years. A total of 44 responses were received (69% response rate). The results from this survey provided support and helped validate the five categories previously identified as priorities by the CFP.

According to the World Future Society, the most common techniques used in futuring include historical analysis, scanning for trends, trend analysis, brainstorming, visioning, and consulting others. Furthermore, the World Future Society states that most futurist methods strive for objectivity but rely heavily on subjective human judgment. As a result of the Workgroup’s literature review, input from CFP think tank members and individuals representing external Academy alliance organizations, and the Workgroup’s analysis, synthesis, and evaluation of all sources of information, as well as its collective judgment, 10 priority change drivers and their associated trends were identified. Because there is considerable overlap among many of the categories in the scanning framework, several of the change drivers and trends also overlap and interact, for example, technology is a separate change driver, but it also impacts the genomics and simulations change drivers.

SURVEY #2: CHANGE DRIVERS AND TRENDS SURVEY

A document including the 10 priority change drivers, their associated trends, rationale, and implications, along with a glossary and references, was released to Academy members, CDR-credentialed dietetics practitioners, CFP think tank members, and Academy external organization liaisons on November 12, 2015. An electronic Change Drivers and Trends Survey asking participants to rate each priority change driver and trend on a scale from strongly disagree (1) to strongly agree (4) and to select their top five change drivers (ranking) was conducted through December 17, 2015. Participants were also given an opportunity to submit written comments related to the priority change drivers either individually or as a representative of an Academy organizational unit.

Data on the survey distribution and response rate and information on survey respondents are provided in Tables 1 and 2, respectively; 3.7% of those who received and opened the e-mail communication completed the survey (n=1,786). Eighty-five percent of those who completed the survey were Academy members (n=1,524). Demographic characteristics of the respondents to the Change Drivers and Trends survey were similar to those in the Academy’s 2015 Compensation and Benefits Survey except there were more educators and doctoral degree respondents in the current survey.

Based on the scale from 1 to 4, mean±standard deviation scores for the 10 priority change drivers ranged from a high of 3.68 ± 0.53 (strongly agree) for Food Becomes Medicine in the Continuum of Health, Aging Population Dramatically Impacts Society, and Accountability and Outcomes Documentation Become the Norm. However, change drivers in the middle and bottom tiers were also perceived as important by respondents. The lowest mean rating for any change driver approached 3 (agree) and 8 of the 10 change drivers were selected as one of the top 5 change drivers by at least 40% of the respondents. Data were also examined based on age and years in practice and there was only one major difference across these subgroups. Consumer Awareness of Food Choice Ramifications Increases was one of the most frequent change drivers ranked in the top 5 among those with <9 years of dietetics experience (64.7%) and significantly less frequent among those with 10 to 29 years and >30 years of experience (55.2% and 49.7%, respectively; P<0.001).

Twelve pages of typewritten comments were submitted in response to the Change Drivers and Trends Survey by individuals and Academy organizational groups; these comments were reviewed by the CFP Workgroup. The Workgroup determined that most of the comments submitted were addressed in the change driver document and utilized these comments when drafting the recommendations for the Visioning Report.

Based on results from the Change Drivers and Trends Survey, input from the CFP, and a thorough review of current Academy organizational unit initiatives, the CFP Visioning Process Workgroup considered implications of all 10 change drivers, and in early 2016 began drafting recommendations for the Visioning Report.

SURVEY #3: SURVEY OF DRAFT RECOMMENDATIONS

The CFP Visioning Process Workgroup initially drafted 31 potential recommendations and five statements of support of Academy ongoing initiatives. The statements of support were developed to avoid duplication of current Academy initiatives. All Academy organizational units, CFP think tank members, and Academy external
<table>
<thead>
<tr>
<th>Society’s Future Needs and Changes</th>
<th>Client/Patient Needs, Preferences and Health Education</th>
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<tr>
<td><strong>Demographics</strong></td>
<td><strong>Lifestyles</strong></td>
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<td>• Diversity</td>
<td>• Cultural values</td>
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<td>• Generations</td>
<td>• Consumer trends</td>
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<td>• Geographic distribution</td>
<td>• Health disparities</td>
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<tr>
<td>• Financial and political disparities</td>
<td>• Health education</td>
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<td>• Education levels</td>
<td>• Health and nutrition literacy</td>
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<td>• Personal resources (income)</td>
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<td><strong>Health care</strong></td>
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<td>• Health care reform</td>
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<td>• Food systems management</td>
<td>• Coordinated care</td>
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<td>• Food and nutrition security</td>
<td>• Health care delivery systems and models including long-term care and acute care facilities</td>
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<tr>
<td>• Food safety</td>
<td>• Alternative medicine/health</td>
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<td>• Food-related environmental sustainability</td>
<td>• Access to primary care</td>
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<td>• Agricultural systems</td>
<td>• Access to RDNs and NDTRs</td>
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<td></td>
<td>• Quality care and outcomes</td>
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<tr>
<td><strong>Public Health, Policies and Priorities</strong></td>
<td><strong>Economics/Market Forces</strong></td>
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<td>• Obesity</td>
<td>• Economic outlook</td>
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<td>• Nutrition and physical activity across the lifespan</td>
<td>• General employment trends</td>
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<tr>
<td>• Chronic disease management</td>
<td>• Wages</td>
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<tr>
<td>• Health promotion and wellness</td>
<td>• Areas for job growth</td>
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<tr>
<td>• Changing the environment/infrastructure to promote healthy lifestyle</td>
<td>• Delivery and payment for nutrition services</td>
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<td>• Public reporting of measureable results for nutrition services</td>
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<tr>
<td><strong>Advances in Medicine, Science, and Technology</strong></td>
<td><strong>Global Context</strong></td>
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<tr>
<td>• Genetics, genomics</td>
<td>• Nutrition and dietetics practices in other countries</td>
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<td>• Behavioral science</td>
<td>• Migration/immigration and global workforce</td>
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<td>• Information communication technologies</td>
<td>• Global professional collaboration</td>
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<td>• Mobile connectivity</td>
<td>• Trends in population health and agriculture</td>
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<td>• Electronic health records</td>
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<td><strong>Profession’s Future Needs and Changes</strong></td>
<td><strong>Work and Workplaces</strong></td>
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<td><strong>Education/Professional Development</strong></td>
<td><strong>Work and Workplaces</strong></td>
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<td>• Integrated didactic education and supervised practice</td>
<td>• Practice roles</td>
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<td>• Knowledge and continuing competence</td>
<td>• Business models</td>
</tr>
<tr>
<td>• Education programs and curriculum</td>
<td>• Emerging opportunities</td>
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<td>• Learning technologies and platforms</td>
<td>• Competitive providers of nutrition and dietetics services</td>
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<td><strong>Workforce Projections</strong></td>
<td>• Work and family balance</td>
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<td>• Supply and demand</td>
<td>• Salaries and benefits</td>
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<td>• Mobility and adaptability</td>
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<td>• Workplace settings and focus areas</td>
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<td>• Staffing models and ratios</td>
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<td>• Retention of RDNs, NDTRs, and dietetics students/interns</td>
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<td>• Diversity of the workforce</td>
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<td><strong>Practice Requirements</strong></td>
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<td>• Evidence-based practice</td>
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<td>• Business and entrepreneurial skills</td>
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<td>• Technology use</td>
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<td>• Education, counseling, and behavior change</td>
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<td>• Cultural competency</td>
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<td>• Interprofessional training and proficiency</td>
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<td>• Practice efficiency methods</td>
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*(continued on next page)*

**Figure 1.** Scanning framework highlighting the five priority categories identified for the 2014-2017 Visioning Cycle by the Council on Future Practice.
organization liaisons were sent a Survey of Draft Recommendations to obtain their feedback on the value of the 31 potential recommendations in meeting future practice needs of the profession in spring 2016. Participants were asked to indicate whether each of the 31 recommendations met each of the following six criteria by providing a yes or no response:

- increases the value of the registered dietitian nutritionist (RDN) and nutrition and dietetics technician, registered (NDTR);
- increases the reach and influence of the RDN and NDTR;
- responds to new practice needs for the profession of nutrition and dietetics;
- empowers Academy members to be visionary leaders and innovators for the profession;
- meets emerging marketplace needs; and
- identifies educational or credentialing needs required for future practitioners and their development.

Participants were also asked whether the recommendation had the potential to cause harm or unintended consequences to the Academy, its divisions, members, and the public, and if so, to explain how and why. The last section of the survey gave participants an opportunity to provide comments and suggest additional recommendations related to the 10 change drivers. The survey closed on May 31, 2016, and survey responses were analyzed using both quantitative and qualitative methods.

Forty-one organizational units responded to the Survey of Draft Recommendations, with an additional 37 individuals responding on behalf of an organizational unit. The 37 individual responses were then categorized by their organizational unit and combined with the initial 41 organizational unit responses for a total of 47 organizational unit responses. Percentages representing the number of people or groups that indicated the recommendation met all six criteria were calculated. Results revealed that 28 of the 31 recommendations reached >80% consensus for meeting all six criteria, suggesting support for the majority of the recommendations. The three remaining recommendations reached a consensus between 70% and 74%.

The CFP Visioning Process Workgroup reviewed the 318 written comments from the Survey of Draft Recommendations, which were analyzed and categorized into 18 themes by Academy staff. Workgroup members agreed to decrease the number of recommendations to make their implementation more feasible. Upon further review of the comments and themes, six themes were identified as a way to help prioritize and potentially eliminate recommendations:

- not within the Academy’s purview;
- concerns over financial burden and return on investment;
- burden outweighs benefit;
- recommendation solves a current problem not a vision or solution to a future problem;
- disagree with value of the recommendation; and
- dilution of RDN credential/blurring of professional lines.

Those recommendations where >10% of the comments fell under any one of these six themes were first evaluated for potential elimination. After additional review of both the quantitative and qualitative data, Workgroup members determined by consensus which draft recommendations to eliminate, retain, consolidate, and/or modify and edit. This process resulted in 12 recommendations and seven statements of support for Academy ongoing initiatives for the 2017 Visioning Report.

### Figure 1. (continued) Scanning framework highlighting the five priority categories identified for the 2014-2017 Visioning Cycle by the Council on Future Practice.

<table>
<thead>
<tr>
<th>Profession’s Future Needs and Changes</th>
<th>Advocacy, Credentialing, and Licensure</th>
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<td>Career Advancement and Leadership</td>
<td>• Advocating for the profession</td>
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<td>• Reward and recognition</td>
<td>• Patterns in credentialing in nutrition and dietetics</td>
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<tr>
<td>• Leadership and management</td>
<td>• Competing and related credentials</td>
</tr>
<tr>
<td>• Drive and motivation</td>
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<td>• Mentoring new practitioners</td>
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<tr>
<td>Translating Evidence-Based Research into Practice and Policy</td>
<td>Values and Ethics</td>
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<tr>
<td>• Research on effectiveness of nutrition services</td>
<td>• Evidence-based nutrition</td>
</tr>
<tr>
<td>• Opportunities for practitioner/researcher collaborations</td>
<td>• Social responsibility</td>
</tr>
<tr>
<td>• New developments in nutrition and health sciences</td>
<td>• Personal integrity and professionalism</td>
</tr>
<tr>
<td>• Informatics and data analytics</td>
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<tr>
<td>• Translating research into policy</td>
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</tbody>
</table>

*RDNs = registered dietitian nutritionists.  
*NDTRs = nutrition and dietetics technicians, registered.
### Results: Change Drivers, Trends, and Recommendations for the Nutrition and Dietetics Profession

The CFP’s 2014-2017 visioning process resulted in 10 priority change drivers, their associated trends (Figure 2) and implications, 12 priority recommendations, and seven statements of support for Academy ongoing initiatives. The recommendations were written to address information in the document, *Change Drivers and Trends Driving the Profession: A Prelude to the Visioning Report 2017* (available on the Academy of Nutrition and Dietetics website at: [www.eatrightpro.org/visioning](http://www.eatrightpro.org/visioning)), which was informed by input from Academy members, CDR credentialed dietetics practitioners, Academy organizational units, CFP think tank members, and Academy external organization liaisons. The recommendations are not intended to be all-inclusive, but rather specific, actionable items that can be pursued in the next 10 to 15 years to advance the profession of nutrition and dietetics. Each recommendation may address multiple change drivers, but is most closely aligned with the one change driver noted in the next section, based on consensus among Workgroup members. The change drivers, their trends, implications, recommendations, and statements of support are listed in no particular order and are all important forces impacting the profession of nutrition and dietetics.

### Change Driver: Aging Population Dramatically Impacts Society

**Exponential Growth of the Aging Population Has Dramatic and Wide-Ranging Ramifications and Economic Impacts on Government, Businesses, Families, and Health Care and Support Services**

**Rationale.** Since 2011, when the first baby boomers turned 65 years old, approximately 10,000 Americans turn 65 each day. From 2010 to 2030, the population of those 65 years and older in the United States will swell from 13% to >20% as life expectancies, especially at the older ages, continue to increase. These population trends are projected to escalate the prevalence of chronic disease and functional and cognitive challenges and create a health care cost crisis.

**Implications.**

- Demonstration of the value/cost-effectiveness of evidence-based nutrition care in the prevention, treatment, and management of malnutrition and chronic disease in older populations is essential.
- Training in geriatric nutrition and a variety of geriatric care specialties to support optimal health and improve health outcomes for a diverse aging population in a variety of settings is needed.
- As the ratio of working-age people to retirees decreases, the resources of the country may

### Table 1. Response rate to the Council on Future Practice’s Change Drivers and Trends Survey conducted in November 2015 among Academy members and Commission on Dietetic Registration credentialed professionals

<table>
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<td>3,253 (3.4%)</td>
<td>3,253 (6.8%)</td>
</tr>
<tr>
<td>Completed survey</td>
<td>1,786 (1.89%)</td>
<td>1,786 (3.7%)</td>
</tr>
</tbody>
</table>

### Table 2. Credential and Membership Status of Survey Completers (n=1,786) of Change Drivers and Trends Survey conducted in November 2015 among Academy members and Commission on Dietetic Registration credentialed professionals

<table>
<thead>
<tr>
<th>Credential Status</th>
<th>Academy Membership Status</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Member</td>
<td>Nonmember</td>
</tr>
<tr>
<td>Credentialed</td>
<td>1,436 (80.4%)</td>
<td>236 (13.2%)</td>
</tr>
<tr>
<td>Noncredentialed</td>
<td>66 (3.7%)</td>
<td>18 (1.0%)</td>
</tr>
<tr>
<td>Did not indicate whether</td>
<td>22 (1.2%)</td>
<td>8 (0.5%)</td>
</tr>
<tr>
<td>credentialed or not</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1,524 (85.3%)</td>
<td>262 (14.7%)</td>
</tr>
</tbody>
</table>

Increasing rates of obesity and chronic diseases among older adults dramatically impact the health care system and the economic burden of disease. The risks for preventable chronic diseases and disability increases with age. Almost 3 out of 4 older adults and 2 out of 3 Medicare beneficiaries have multiple chronic conditions. Treatment for Americans with one or more chronic conditions consumes 86% of health care spending. Disease prevention and health maintenance for the aging population are increasingly the focus for improving quality of life and containing costs. Better nutrition and physical and mental activity can prevent many chronic diseases, yet many older adults are food insecure, and 83% do not consume a good-quality diet.

The ratio of working-age (18 to 64 years) people to retirees will decrease dramatically and strain national resources. Currently, 100 working-age people support every 19 people aged 65 to 84 years old, but this ratio will change to 100:30 by 2028; 33 working-age people currently support each person older than 85 years compared with 13:1 in 2046. Businesses and health professions will be impacted dramatically as older adults retire or alter their work lives. The nutrition and dietetics profession is continuing to age (2015: median age of 49 years; 35% were 55 or older; 2005: median age of 44 years; 15% were 55 or older), and the anticipated attrition rate of 2% to 5% will impact the future supply of nutrition and dietetics practitioners.
shift from education to health and caregiving to meet the needs of the older adult population.\textsuperscript{8}

An adequate supply of RDNs and NDTRs is needed to address the impact of an older workforce and anticipated rate of attrition, including retirement.\textsuperscript{2}

**Recommendations.**

- The CFP recommends the Academy implement strategies to increase workforce capacity for the nutrition and dietetics profession to address workforce projections, including the recommendations in the 2011 Dietetics Workforce Demand Study, as well as ongoing workforce projections.

- The CFP recommends the Academy evaluate existing strategies (eg, current online certificate of training programs in leadership and executive management, mentoring programs) to equip Academy members to fill leadership roles in key influential and visible positions in order to address workforce projections and positions vacated by retirees.

### CHANGE DRIVER: EMBRACING AMERICA’S DIVERSITY

**Increasing Racial and Ethnic Diversity of the US Population Requires Innovative Solutions to Improve Health Equity, Health Literacy, Cultural Competency, and the Diversity of Nutrition and Dietetics Practitioners**

**Rationale.** The racial and ethnic background of the US population has shifted dramatically during the past 1\textsuperscript{1/2} decades and continues to undergo a transformation.\textsuperscript{10} Hispanic and Asian populations have experienced the most significant growth, and this trend is expected to continue through 2060.\textsuperscript{16-18} By 2044, >50% of the US population is expected to belong to a minority group.\textsuperscript{10} Despite the changing US population, the percentage of RDNs who are men, black, Asian, or Hispanic changed very little from 2002 to 2011, including the most recent registrants (first 5 years).\textsuperscript{19}

Health equity is an increasingly important public health priority because of evolving US racial and ethnic demographics. Health disparities continue to exist and some have even widened among certain populations, despite decades of work to eliminate them.\textsuperscript{20} Interventions that remove barriers to timeliness, emphasize patient-centered care, and promote equitable use of evidence-based guidelines may promote health equity gains.\textsuperscript{21} The Patient Protection and Affordable Care Act (ACA) aims to advance health equity by reducing health insurance disparities, improving access to providers, promoting increased workforce diversity and cultural competence, and ensuring that limited English proficiency individuals receive resources to communicate more effectively with health care providers.\textsuperscript{22,23}

Under-represented groups are more likely to access nutrition and other health care services from professionals who they perceive to be similar to them.\textsuperscript{10} Community health workers and other lay educators will continue to be used to reduce health disparities and as a solution to the lack of diversity in the health care workforce.

**Implications.**

- RDNs and NDTRs should be culturally competent to interact effectively and appropriately in the workplace with patients/clients, peers, managers, and
### Change Drivers

<table>
<thead>
<tr>
<th>Change Drivers</th>
<th>Associated Trends</th>
</tr>
</thead>
</table>
| **Aging Population Dramatically Impacts Society** | - Increasing rates of obesity and chronic diseases among older adults dramatically impact the health care system and the economic burden of disease.  
- Demand for health care services is increasing dramatically although fewer funds are available to cover the cost.  
- Disease prevention and health maintenance for the aging population are increasingly the focus to improve quality of life and care and contain costs.  
- An aging workforce impacts the economy, businesses, families and health professions.                                      |
| **Embracing America’s Diversity**            | - Community health workers and other lay educators will continue to be used to reduce health disparities and as a solution to the lack of diversity in the health care workforce.  
- As the US population grows more diverse, stark differences between what health providers intend to convey in written and oral communications and what patients understand may increase and further exacerbate health disparities.  
- Health equity is an increasingly important public health priority because of evolving US racial and ethnic demographics. |
| **Consumer Awareness of Food Choice Ramifications Increases** | - Agricultural challenges and rapidly changing technology present entrepreneurial opportunities as food companies seek innovative ways to meet consumer demand for healthy foods and demonstrate their social responsibility.  
- Siloed approaches to agriculture, health, sustainability, and economics are being abandoned for transdisciplinary solutions to reduce hunger, poverty, disease, and environmental destruction.  
- There is a growing interdependence of countries around the world in sustaining the planet’s national resources.  
- Consumers demand increasing levels of food transparency to meet their health, social justice, and environmental stewardship aspirations. |
| **Tailored Health Care to Fit My Genes**     | - Advances in research and increased demand for personalized health and nutrition result in increased availability and decreased costs of genetic testing.  
- Health professionals increasingly manage patient care using genetic profiles but the science of genetics must continue to advance to inform practice. |
| **Accountability and Outcomes Documentation Become the Norm** | - Health care evolutions necessitate increased research and quality improvement activities.  
- The application of informatics facilitates and optimizes the retrieval, organization, storage, and use of data and information for decision-making.  
- Practicing RDNs do not regularly evaluate and conduct research or access evidence-based resources for guidance in clinical practice. |
| **Population Health and Health Promotion Become Priorities** | - Evidence-based and multifactorial interventions that access levels of influence at the policy, systems, and environmental level of the social ecological framework are essential to address population health priorities.  
- Institutions, organizations, and governments are increasingly striving for policy changes that are informed by research, help create a culture of health, and make healthy choices the easy choices.  
- The ACA paves the way for tremendous growth and unprecedented opportunities in workplace health promotion and disease prevention interventions.  
- Hospitals redefine their roles in the continuum of health care services and become immersed in the daily culture of the communities they serve. |

(continued on next page)
subordinates from different ethnic and racial groups.
- New and innovative ways to recruit and retain minority and underrepresented students in nutrition and dietetics programs are needed.\(^{24,25}\)
- There is a need for increased language skills among RDNs and NDTRs, with fluency in Spanish, French, and Cantonese being sought most frequently.\(^{19}\)
- The growth of community health workers presents an opportunity for RDNs and NDTRs to supervise and educate these practitioners.

### Statement of Support for Academy’s Ongoing Initiatives.
- The CFP supports the Academy’s Diversity Committee in its efforts to increase diversity within the profession as stated in objective #2 of the Diversity Strategic Plan: Objectives and Tactics 2015-2020: Build an effective program of community outreach to identify and attract students from groups traditionally under-represented in the nutrition and dietetics profession (including race, ethnicity, and sex).

### Change Driver: Consumer Awareness of Food Choice Ramifications Increases

The Public Seeks More Information About Their Food Across the Entire Supply Chain and Has Increased Awareness of the Global Ramifications of Their Food Choices

**Rationale.** A growing social movement is underway where consumers desire an increased connection to food and nature.\(^{2,3,26,27}\) Today’s consumers seek transparency on how, where, and

<table>
<thead>
<tr>
<th>Change Drivers</th>
<th>Associated Trends</th>
</tr>
</thead>
</table>
| Creating Collaborative-Ready Health Professionals | - Transdisciplinary professionalism is becoming an essential ideology for a 21st century health care system.  
- IPE is an increasingly essential strategy for preparing the health care workforce for a patient-centered, coordinated and effective health care system.  
- A resurgence of interest in IPE has occurred with the goal of team-based care becoming the norm in health care.  
- Many difficulties and challenges exist to the successful implementation of IPE but innovative approaches can help overcome some of the challenges. |
| Food Becomes Medicine in the Continuum of Health | - Innovations by food and nutrition-related industries are capitalizing on consumer’s growing passion for nutrition and health.  
- Unprecedented opportunities to lead preventive aspects of health arise from health care reform and emerging models of health care.  
- Nutrition and MNT\(^{d}\) are poised for primetime with the high prevalence of obesity and its related diseases. |
| Technological Obsolescence is Accelerating | - Innovative digital technologies personalize, revolutionize, and increase access to health care.  
- Technological applications, economics and student demands disrupt traditional educational institutions.  
- Technological advances impact work settings and change how, when, and where people work.  
- The digital age is transforming next-generation food systems. |
| Simulations Stimulate Strong Skills | - Simulations help address increased complexity of health care, higher patient acuity levels, and patient safety.  
- Accountability of care, pay for performance, and financial penalties for provider errors spur interest in simulations.  
- The use of simulations increases in response to cost-cutting in higher education and reduction in the availability of clinical placements for students.  
- The desire to improve critical thinking skills of learners drives the development and use of simulations. |

\(^{a}\)RDNs=registered dietitian nutritionists.  
\(^{b}\)ACA=Patient Protection and Affordable Care Act.  
\(^{c}\)IPE=interprofessional education.  
\(^{d}\)MNT=medical nutrition therapy.

*Figure 2. (continued) Ten priority change drivers and their associated trends for the Council on Future Practice’s 2014-2017 Visioning Cycle.*
by whom their food is grown, processed, packaged, and distributed, and how revenues from their purchases are allocated. Recent studies indicate public support, including support among racial minority and lower-income groups, for organic, local, non—genetically modified, and nonprocessed food. Local food sales have increased from $5 billion in 2008 to $11.7 billion in 2014, and are expected to outpace total food and beverage retail sales over the next 5 years to reach $20 billion in 2019.

Increased public interest in the US food supply is accompanied by global concerns over the world’s growing population, which is slated to reach 9 billion by 2050. Concurrently, the risk of climate change, high amounts of food waste, and high-yield gaps underscore the need to produce more food using the same amount of land and fewer inputs. Greater urbanization, growing international trade, and planet-wide ramifications of poor environmental stewardship require a global approach to food and agricultural systems.

Agriculture is a major contributor to greenhouse gas emissions and water constraints. If current dietary trends hold, they are projected to create an 80% increase in global greenhouse gas emissions and global land clearing, while simultaneously contributing to high rates of chronic disease. Globally, about 70% of the total water that is withdrawn from surface water and groundwater is used for irrigation, and there are growing concerns about agricultural pesticides and herbicides contaminating the water supply through leaching, runoff, and spray drift.

In response, increasing numbers of consumers are likely to adopt sustainable diets.

### Implications.

- Future-focused dietary interventions will encompass ways to improve the health of the planet, including food waste reduction and consumption of foods that minimize greenhouse gas emissions and promote water conservation.
- RDNs and NDTRs need education on food systems production practices and policies and should play a key role in educating the public about the relationships among diet, environment, and public health.
- Food-sector jobs across all parts of the supply chain will increase, creating opportunities for food business entrepreneurs to utilize their education and leadership skills to create high-paying jobs.
- To capitalize on jobs created by the local food movement, RDNs and NDTRs need to understand agricultural systems and how diet choices influence local economies.

### Statement of Support for Academy’s Ongoing Initiatives.

- The CFP supports the Academy’s Second Century initiative, including the Nutrition Impact Summit, and opportunity areas on increasing food resilience through the integration of nutrition expertise with local and global agricultural practices and food systems, and on building capacity by expanding training in food systems throughout the continuum of education for NDTRs and RDNs.

### Change Driver: Tailored Health Care to Fit My Genes

Continuing Research and Advances in Genetics and Nutritional Genomics, with Their Ability to Predict, Prevent, and/or Delay Illnesses and Chronic Diseases, Will Become the Mainstay of Health Care in the Future

**Rationale.** Genetics research continues to accelerate, resulting in exponential advances in medicine and medical knowledge. Ray Kurzweil, a technology specialist, predicts that the future holds the promise of routinely adding genes that are protective and disabling genes that promote diseases and aging. Genetic testing for diseases for which tests are not currently available will become more readily available, making predictive, preventive, early detection, and personalized interventions, including personalized nutrition and lifestyle interventions, possible. Consumers want to learn about their individual risks for future illnesses to promote their health and prevent disease. Consumers look to Direct to Consumer genetic testing, which has become increasingly available, as a means of predicting risk of disease. RDNs can assume an increasingly important role in the emerging health care system that focuses on a genetic predisposition model of health and disease, disease prevention, and integrative health care, with the possibility of receiving reimbursement for lifestyle and nutrition interventions and counseling.

### Implications.

- Medicine is moving toward tailoring treatments to individual genetic, environmental, and behavioral characteristics to improve patient responses. Advances in nutritional genomics offer the promise of personalized nutrition and unprecedented opportunities for the RDN, including reimbursement for nutrition and lifestyle interventions.
- The emerging genetic predisposition model of health and disease can position the RDN as a major force in health care. Designing nutrition interventions that incorporate a patient’s/client’s genetic profile is a task appropriate for specialists and advanced practice RDNs.
- RDNs working in the area of nutritional genomics within interprofessional teams will need the scientific knowledge and technical skills to interpret genetic testing and to provide personalized nutrition advice that prevents or modifies disease risk. Specialized and advanced knowledge and skills are needed for RDNs to work in the area of nutritional genomics.
- RDNs function within and collaborate with interprofessional teams to interpret genetic testing results and develop personalized nutrition care plans. RDNs may assume
primary management of patients when food and nutrition are the primary intervention.60

**Recommendation and Statements of Support for Academy’s Ongoing Initiatives.** The change driver on genetics and nutritional genomics is addressed in the following recommendation and two statements of support for the Academy’s ongoing initiatives by use of the terminology emerging areas of practice and 10 change drivers:

- The CFP recommends the Center for Lifelong Learning collaborate with Dietetic Practice Groups and Member Interest Groups to create additional professional development opportunities related to the 10 change drivers from Change Drivers and Trends Driving the Profession: A Prelude to the Visioning Report 20175 and develop additional online certificate of training programs, which include integrated research modules, in emerging areas of practice to update and advance nutrition and dietetics-related knowledge and skills.
- The CFP supports ACEND in incorporating emerging areas of practice into standards and competencies of the curricula for nutrition and dietetics education programs.
- The CFP supports CDR in incorporating competencies related to emerging areas of practice into the Essential Practice Competencies for the CDR’s Credentialed Nutrition and Dietetics Practitioners.

**CHANGE DRIVER: ACCOUNTABILITY AND OUTCOMES DOCUMENTATION BECOME THE NORM**

**Increased Emphasis on Evidence-Based Practice and Accountability for Documenting Beneficial and Cost-Effective Outcomes Become the Norm in Health Care**

**Rationale.** Health care costs in the United States have been rising in part due to the aging of the population and prevalence of chronic disease.61,62 According to the Institute of Medicine, there is a “need for evidence about what works best for whom in order to inform decisions that lead to safe, efficient, effective, and affordable care.”63 The Institute of Medicine has set a goal that by “…2020, 90% of clinical decisions will be supported by accurate, timely, and up-to-date clinical information and will reflect the best evidence.”63

In addition, current and emerging health care delivery models are driving the demand for utilization of research as the basis for policy development.63-67 The ACA aims to rein in health care costs and improve quality of care and outcomes through accountable care organizations, Patient-Centered Medical Homes, value-based purchasing, Centers for Medicare and Medicaid Services financial penalties for hospitals with high readmission rates and no payment for “never events,” such as hospital-acquired pressure ulcers.68 Practicing RDNs do not regularly evaluate and conduct research or access evidence-based resources for guidance in clinical practice.69,70 Approximately 50% of RDNs consult evidence-based resources and read professional journals less than once a month.69 Perceived barriers to research include lack of confidence, expertise, skills, time, funding, and administrative support.70 RDNs are more likely to engage in research activities when they are knowledgeable about evidence-based practice, possess a higher level of education, have taken a research course, and frequently read research articles.70

**Implications.**

- Organizations increasingly rely on data and outcomes to drive decisions about priorities, including how and where their limited resources are utilized.
- RDNs require the necessary skills to read, interpret, and apply research in their practice settings; conduct outcomes research; and utilize informatics to enhance their ability to show positive outcomes. Outcomes research is especially vital for the survival and advancement of the nutrition and dietetics profession and should be routinely conducted by RDNs.70

- RDNs must promote their unique role in the identification, promotion, and documentation of how nutrition interventions are cost-effective, lead to cost reductions/savings, and improve outcomes (clinical and patient-centered) to facilitate adoption of effective interventions into institutional and/or public policies.71-74

- RDNs must be adept at identifying, treating, and documenting malnutrition to ensure positive patient outcomes and reimbursement for health care facilities to cover the costs of caring for malnourished patients.

- Organizations and RDNs with data and outcomes to support their interventions and validate their professional contributions are more likely to receive reimbursement and other funding in the current and future environment of limited health care dollars.

**Recommendations and Statement of Support for Academy’s Ongoing Initiatives.**

- The CFP recommends CDR require all credentialed dietetics practitioners to obtain continuing professional development in evaluation and documentation of nutrition and fiscally responsible outcomes tailored to their area of practice to demonstrate the value of the profession.
- The CFP supports the Academy’s continuing efforts with the US Department of Health and Human Services’ Health Resources and Services Administration to include RDNs as essential health providers within the Bureaus of...
Health Workforce and Primary Health Care.

CHANGE DRIVER: POPULATION HEALTH AND HEALTH PROMOTION BECOME PRIORITIES

Health Care in the United States Increasingly Focuses on Population Health to Improve Effectiveness and Reach and Slow the Growth of Health Care Costs Rationale. Transformative change to improve the health of populations and reduce health care costs is underway in the United States. Forces converging to bring a national focus to population health include the ACA, aging of the US population, and surge in nutrition-related chronic conditions. The ACA promotes population health by its focus on better care, better health, and lower costs. A culture change is revolutionizing institutions as they move beyond wellness programs to engage people at every level of their organizations in shifting their focus toward health promotion and disease prevention and creating a culture of health as part of their daily practices. Hospitals are playing a central role in creating a culture of health and are natural leaders for workplace and community-wide health promotion interventions due to their mission, reach, and influence; hospitals can adopt model policies and practices that promote the health of both their employees and patrons. Even the institutional kitchen is now at the forefront of an institution’s wellness mission. Some hospitals serve between several thousand and up to 1 million meals per year to employees, patients, and visitors, with each meal representing an opportunity to promote a healthy choice. People spend time in schools, workplaces, food outlets, neighborhoods, and communities, which are all important targets for policy-, systems-, and environmental-level interventions as part of a social ecological, comprehensive population health approach.

Environmental-level interventions based on the social ecological model.
- The profession should adjust training models to reflect emerging areas of practice in health promotion in community settings where people live, work, and play.
- RDNs need skills to track effects and evaluate policy change initiatives designed to address the underlying causes of environments that foster poor dietary intake.
- Sustained engagement in advocacy and public policy is essential to champion RDNs as qualified providers of population health interventions.
- Nutrition is a key component of workplace health promotion; RDNs and NDTRs have unique qualifications to practice in these settings.

Recommendation.
- The CFP recommends the Center for Lifelong Learning and the Committee for Public Health/Community Nutrition provide professional development opportunities for current nutrition and dietetics practitioners to increase their understanding and application of public health principles and population health to promote behavior change, extend their reach, and influence policy for the optimal health of communities.

CHANGE DRIVER: CREATING COLLABORATIVE-READY HEALTH PROFESSIONALS

Transdisciplinary Professionalism and Interprofessional Education Are the Cornerstones of Patient-/Client-Centered Care to Help Solve Problems, Improve Safety and Quality, and Drive Innovation Rationale. The Institute of Medicine published three seminal publications beginning in 1999 that focused on health care quality, patient safety, and their relationship to health professions education.

Implications.
- More RDNs and NDTRs must position themselves for new and expanded practice roles to address policy-, systems-, and environmental-level interventions based on the social ecological model.
- The profession should adjust training models to reflect emerging areas of practice in health promotion in community settings where people live, work, and play.
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Implications.
- Nutrition and dietetics practitioners need sufficient IPE literacy and leadership skills to join and lead teams where nutrition plays an important role.
- Dietetics educators should embrace innovative ways to incorporate IPE into their programs (e.g., simulations and web-based resources, health fairs, and student-run clinics).
- Engaging in IPE is an opportunity to actively promote a broader understanding and appreciation of the RDNs’ role and how it differs from someone providing general nutrition advice; RDNs

Appendix A
need to be “at the table” now to be recognized and included as an essential interprofessional health team member, particularly as one payment for services continues to be the direction of future reimbursement.  

- Well-designed studies to determine how IPE affects patients, populations, and health system outcomes are needed.

Recommendation and Statement of Support for Academy’s Ongoing Initiatives.

- The CFP recommends the Academy continue to increase its visibility and influence in national efforts related to interprofessional education and practice and enhance innovative continuing professional development in this area in collaboration with other health care professionals to promote and advance the role of RDNs as essential health care providers.
- The CFP supports the Academy’s, Nutrition and Dietetics Educators and Preceptors’, and ACEND’s advocacy work for inclusion of nutrition and dietetics practitioners in interprofessional education and practice, including ACEND’s 2017 Standards for interprofessional practice as a core component of nutrition and dietetics education programs.

CHANGE DRIVER: FOOD BECOMES MEDICINE IN THE CONTINUUM OF HEALTH

Nutrition and Medical Nutrition Therapy Become Even More Critical in Current and Future Emerging Health Care Models for Their Pivotal Roles in Wellness, Health Promotion, Disease Prevention, and Disease Management

Rationale. The public’s explosion of interest in nutrition and wellness is transforming food retailers who are positioning themselves as health care destinations. As health care is disrupted and transitions from the medical model to one of prevention and wellness, nutrition is poised to take center stage in health-promotion and disease-prevention programs in community-based settings. Forces that are converging to position nutrition and medical nutrition therapy as indispensable to health and well-being include the prevalence of obesity and its comorbidities, especially among younger adults; the large human and financial burdens and costs of diseases associated with obesity and an aging population; and the recent revelation that poor diet is the biggest contributor to early death globally. Lifestyle risk-factor modification and weight management are essential components of health promotion and disease prevention programs in worksites, schools, community clinics, health clubs, social service programs, and other community settings.

A transformation in health care is underway, with primary care leading the way, and the concepts of prevention, wellness, and public health growing in popularity. There are unprecedented opportunities to lead preventive aspects of health due to health care reform and emerging models of health care. The emerging patient-centered medical home model of care includes acute and chronic care and preventive nutrition-related services, but few RDNs are integrated into and valued members of the Patient-Centered Medical Home team.

Consumers are actively using foods as medicine to address their health concerns and medical conditions. Food and nutrition-related industries are capitalizing on consumers’ growing passion for nutrition and health and are overhauling products to cater to consumers’ desires for safe and healthy foods. Food retailers are increasingly investing in health and wellness; 70% of those surveyed perceive health and wellness programs as a significant growth opportunity and envision pharmacists and RDNs as taking the lead. Supermarket RDNs are increasing in numbers and can impact public health by reaching millions of shoppers.

Implications.
- Food-sector jobs may increase in food and nutrition-related industries to support the public’s interest in nutrition and healthier lifestyles and meet the ACA mandates for nutrition labeling on restaurant menus and vending machines.
- RDNs must be proactive in promoting nutrition and positioning themselves as an essential and valued part of Patient-Centered Medical Homes and other emerging models of health care.
- Increased encroachment and competition in the areas of wellness, health promotion, and disease prevention may occur due to explosion in the number of nutrition-related credentials and lack of regulatory standards.
- Adjustments in educational models and credentials to reflect emerging areas of practice, such as wellness and health promotion, may be necessary to remain competitive in the changing health care environment.

Recommendations and Statements of Support for Academy’s Ongoing Initiatives.

- The CFP recommends the Center for Lifelong Learning collaborate with Dietetic Practice Groups and Member Interest Groups to create additional professional development opportunities related to the 10 change drivers from Change Drivers and Trends Driving the Profession: A Prelude to the Visioning Report 2017 and develop additional online certificate of training programs, which include integrated research modules, in emerging areas of practice to update and advance nutrition and dietetics-related knowledge and skills.
- The CFP recommends the Academy promote collaboration among Dietetic Practice Groups and commit additional resources to position RDNs and other CDR credentialed practitioners, consistent with their scope of practice, as local and global leaders in the prevention, reduction, assessment, and management of malnutrition across all practice settings by increasing training in nutrition risk screening, including nutrition-focused physical examinations, and by influencing public policy.
regulatory agencies, and other health care practitioners.

- The CFP recommends the Academy develop a standing group of member experts to advise the Academy on controversial topics in an evidence-based and timely manner to increase the visibility and credibility of the Academy and promote the role of the RDN and NDTR.

- The CFP recommends the Academy take the lead in collaborating with other organizations and groups on the development of standards and qualifications for individuals working in wellness and health promotion/disease prevention programs to ensure delivery of evidence-based nutrition services by RDNs and NDTRs to better address nutrition-related health disparities.

- The CFP supports ACEND in incorporating emerging areas of practice into standards and competencies of the curricula for nutrition and dietetics education programs.

- The CFP supports CDR in incorporating competencies related to emerging areas of practice into the Essential Practice Competencies for the CDR’s Credentialed Nutrition and Dietetics Practitioners.

- The CFP supports the Academy in its Second Century initiative to foster a culture of innovation throughout the Academy and profession commencing with the September 2016 Nutrition Impact Summit and forthcoming innovations projects and utilize innovative communications to increase member engagement in the Academy’s mission and vision.

**CHANGE DRIVER: TECHNOLOGICAL OBSOLESCENCE IS ACCELERATING**

Advances in Technologies Are Having Dramatic Impacts on Health Care, Education, Employment, and Food Systems

**Rationale.** Technology is transforming the way we learn, work, and live. Our lives now revolve around access to worlds of information, instant communication, and online shopping. The "perfect storm" has arrived in health care as digital technologies and online platforms emerge. Patients can get a secure video doctor consultation via their smartphones for $30 to $40. Innovative digital technologies personalize, revolutionize, and increase access to health care. Telehealth enables society to address health care workforce shortages in rural America as never before. Telemedicine interventions are as good as or better than traditional approaches to care. A teledietetics model is more cost-effective than a face-to-face model for long-term weight reduction.

Health and fitness apps are the fastest-growing category of digital technologies, with an estimated worth of $4 billion in 2014, likely to increase to $26 billion by 2017. Nutrition apps, mostly geared to weight loss, support adherence to diet monitoring. Future medicalized smartphones and doctor-designed, patient-customized mobile apps can potentially decrease the use of doctors and health care costs, reduce the need for expensive clinical trials, speed up care, and increase patients' control over their own care.

Consumers will become “CEOs of their own health” in the future, as biometric sensors monitor their health status and provide warnings to stop disease before it happens. As digital citizens, we should value and appreciate the many benefits of technological innovations, but we must also understand the many implications and unanticipated consequences to shape the technological future we desire.

**Implications.**

- RDNs and NDTRs who can develop technological innovations will be in demand.
- Digital literacy should be a part of the official curriculum to prepare all health care professionals for digital health care technologies.
- Barriers to utilizing teledietetics need to be addressed in order for RDNs to embrace technology.

**Recommendation.**

- The CFP recommends the Academy initiate pilots and generate outcomes data on the provision of nutrition services using technology (eg, telehealth or teledietetics) and develop a framework (eg, overcoming barriers, “how to’s,” reimbursement, etc) for practitioners utilizing this method of delivering nutrition services.

**CHANGE DRIVER: SIMULATIONS STIMULATE STRONG SKILLS**

Use of Simulation as an Instructional Methodology and the Amount of Research Focused on Simulations in Health Care Education Has Become Increasingly Popular in the Last Few Decades

**Rationale.** By simulating actual work settings, simulations play a vital role in training before employment, as well as updating skills of current practicing professionals. When compared with clinical experience, research has shown similar or improved learner attainment of knowledge and skills from simulation. The use of simulations in dietetics education will continue to expand because they are effective pedagogical tools, consistent with competency-based education, and have the potential for cross-discipline competency development.

Simulations help address increased complexity of health care, higher patient-acuity levels and patient safety. Consistency in students’ simulated experiences can enhance the quality of patient care. Learners can make mistakes in simulated scenarios, learn from their mistakes, and rehearse clinical behaviors in a low-risk environment, thus decreasing harm to patients. Simulations that promote team settings, where professionals learn from, with, and about
A severe shortage of supervised practice sites for clinical placements for students remains a challenge for dietetics education programs that are under pressure to recruit and maintain preceptors. By decreasing the amount of time learners must spend in facilities and relieving some of the pressure on supervised practice sites, simulations can optimize scarce clinical education resources. Simulations can also address the unequal quality of various practice sites and the inconsistent experiences students obtain during clinical placements.

Implications.

- Simulations should be gradually implemented and integrated into existing curricular structures with deliberation and adequate evaluation to ensure program quality; research and evaluation should focus on the optimal method and frequency of exposure, quality of

Glossary

Accountable Care Organization: A model of health care in which groups of physicians, health care providers, and hospitals align to provide coordinated, high-quality care to their patients both inside and outside of the hospital.

Advanced practice: The practitioner demonstrates a high level of skills, knowledge, and behaviors. The individual exhibits a set of characteristics that include leadership and vision, and demonstrates effectiveness in planning, evaluating, and communicating targeted outcomes. Cultural competence: The ability of health organizations and practitioners to recognize the cultural beliefs, values, attitudes, traditions, language preferences, and health practices of diverse populations, and to apply that knowledge to produce a positive health outcome. In addition, competency includes communicating in a way that is linguistically and culturally appropriate.

Culture of health: The result of what happens when an organization moves beyond wellness programs and undergoes “a fundamental shift toward health promotion as part of the daily practice of the organization and engages people at every level.”

Interprofessional education: “. . . occurs when students from two or more professions learn about, from, and with each other to enable effective collaboration and improve health outcomes.”

Medical nutrition therapy: An evidence-based application of the Nutrition Care Process (nutrition assessment, nutrition diagnosis, nutrition intervention/plan of care, and nutrition monitoring and evaluation). The provision of medical nutrition therapy typically results in the prevention, delay, or management of diseases and/or conditions.

Nutritional genomics: A broad term encompassing several fields, all of which involve how nutrients and genes interact and are expressed to reveal phenotypic outcomes, including disease risk.

Nutrition informatics: The effective retrieval, organization, storage, and optimum use of information, data, and knowledge for food and nutrition-related problem solving and decision making. Informatics is supported by the use of information standards, processes, and technology.

Patient-Centered Medical Home: A model of the organization of primary care that delivers the following five core functions of primary health care: comprehensive care; patient-centered care; coordinated care; accessible services; and quality and safety.

Social ecological framework: A conceptualization of intervention targets and levels of influence on behavior and behavior change: the individual level includes people’s knowledge, skills, and attitudes; the interpersonal level includes social and peer influences; the institutional/organization level includes changes in organizational policies, practices, and environments; the community level includes neighborhoods and community environments; and policy and systems levels include changes in policies and social structures and systems through policy advocacy and political actions.

Sustainable diets: Diets with low environmental impacts that are economically fair and affordable and contribute to food and nutrition security and healthy lives for present and future generations.

Telehealth: “. . . the use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health, and health administration. Telehealth will include both the use of interactive, specialized equipment, for such purposes as health promotion, disease prevention, diagnosis, consultation, therapy, and/or nutrition intervention/plan of care, and non-interactive (or passive) communications, over the Internet, video-conferencing, e-mail or fax lines, and other methods of distance communications, for communication of broad-based nutrition information.”

Telemedicine: “. . . applicable to physicians and other practitioners, and is the use of medical information exchanged from one site to another via electronic information and telecommunications technologies to improve patients’ health status, to engage in the diagnosis and treatment of medical conditions, to support clinical care, or to provide health services or aid health care personnel at distant sites.”

Telenutrition: “. . . involves the interactive use, by a Registered Dietitian or Registered Dietitian Nutritionist, of electronic information and telecommunications technologies to implement the Nutrition Care Process (nutrition assessment, nutrition diagnosis, nutrition intervention/plan of care, and nutrition monitoring and evaluation) with patients or clients at a remote location, within the provisions of their state licensure as applicable.”

Transdisciplinary professionalism: An approach to creating and carrying out a shared social contract that ensures multiple health disciplines/professions, working in concert, are worthy of the trust of patients and the public.

Value based purchasing: “. . . a financial plan that links provider payment to improved performance by the health care provider.”

Visioning: A process in which a group describes the future it wants; visioning creates a picture of the desired future status, affirms the best of what could be, visualizes what excellence looks like, and shows the best scenario for the time; it illustrates how an organization or profession wants to “look” to insiders and outsiders and some say the vision is what you would describe if you had an overnight epiphany that illustrates the perfect position for an organization or profession.

World Future Society: A chartered nonprofit educational and scientific organization founded in 1966 in Washington, DC; it is an association of people interested in how social and technological developments are changing the future; serves as a neutral clearinghouse for ideas about the future, including forecasts, recommendations, and alternative scenarios, that help people anticipate what might happen in the next 5, 10, or more years ahead.
assessments, tools, and impact on individual learners and patients' care.¹⁹

- Simulations in dietetics education have the potential to decrease the number of required hours in actual practice settings (e.g., clinical, management, community), improve preparation for supervised practice and improve critical thinking skills, but simulations cannot and should not be used to replace supervised practice experiences.¹¹⁷,¹¹⁹,¹²⁰

- Simulations designed for use in dietetics education programs could also be used to re-train and update the skills of experienced RDNs and NDTRs.¹¹⁵

- Collaboration should be encouraged among dietetics educators and with other health professional education programs experienced in simulations, with respect to the development of simulation topics, design of simulations based on best education practices, and simulation evaluation data.¹¹⁴,¹¹⁷,¹¹⁹

Recommendation.

- The CFP recommends ACEND, Nutrition and Dietetics Educators and Preceptors, and CDR work collaboratively to establish minimum standards and recommendations for evaluations of simulations for use with dietetics education programs and with current credentialed practitioners for continuing professional development and create, maintain, and promote a simulations bank featuring simulations that meet the standards and are specific to different levels, areas of practice, and scopes of practice.

CONCLUSIONS

The Visioning Report of 2017 reflects the CFP’s work over the past 3 years, informed by input from Academy members, CDR-credentialed dietetics practitioners, Academy organizational units, CFP think tank members, and Academy external organization liaisons. The Visioning Report 2017 is presented with support from the members of the 2015-2016 and 2016-2017 CFP, Board of Directors Executive Committee, and House of Delegates Leadership Team.

Visioning is a continuous process and includes a 3-year cycle of activities in which the CFP, with input from multiple stakeholders, defines a preferred future for the nutrition and dietetics profession. The outcomes of the 2014-2017 visioning process will help to inform the Academy and its organizational units for moving the profession forward in the next 10 to 15 years. The profession will continue to evolve, impacted by an ever-changing world, and credentialed dietetics practitioners must anticipate and be prepared for changes in practice, education, and credentialing. Although the future is unknown and we live in a time of exponential change, the CFP and other Academy stakeholders must be proactive and visionary, and collectively shape the desired future of the profession of nutrition and dietetics.

References


AUTHOR INFORMATION

J. R. Kicklighter is an associate professor emeritus, Department of Nutrition, Georgia State University, Atlanta. B. Dorner is president, Becky Dorner & Associates, Inc, and president, Nutrition Consulting Services, Inc, Dunedin, FL. A. M. Hunter is an associate professor, Department of Biomedical Sciences, Missouri State University, Springfield. M. Kyle is a diabetes and nutrition care coordinator, Pen Bay Medical Center, Rockport, ME. M. Flugh Prescott is a postdoctoral fellow, Department of Food Science and Human Nutrition, Colorado State University, Fort Collins. S. Roberts is area director of clinical nutrition and dietetics internship director, Baylor University Medical Center/Aramark Healthcare Nutrition Services, Dallas, TX. B. Spear is professor of pediatrics emerita, University of Alabama at Birmingham. R. K. Hand is director, Dietetics Practice Based Research Network, Academy of Nutrition and Dietetics, Chicago, IL. C. Byrne is former director, Academy of Nutrition and Dietetics, Chicago, IL.

Address correspondence to: Jana R. Kicklighter, PhD, RDN, LD, FAND, 6221 Traymore Trace Smyrna, GA 30082. E-mail: jkicklighter@gsu.edu

Address requests for reprints to: Marsha Schofield, Academy of Nutrition and Dietetics, 120 S Riverside Plaza, Suite 2000, Chicago, IL 60606.

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