Introduction:
During the House of Delegates dialogue session on *Nutrition Services Delivery and Payment: The Business of Every Academy Member* (October 18 and 19, 2013), the need for outcomes data to support increased reimbursement for nutrition services of the registered dietitian nutritionist (RDN) and dietetic technician, registered (DTR) emerged as a theme. We must use research to demonstrate how RDNs and DTRs improve the nation’s health through food and nutrition in order to advocate for increased reimbursement.

Research is frequently acknowledged as the basis of our profession. Members frequently apply and discuss research in practice but they are less likely to contribute to new nutrition and dietetics related research. The question is why all the interest but minimal contribution? An article published in 2000 and one of the driving forces for the HOD dialogue in Spring 2001 and Spring 2002 suggested that the main barriers to dietitians participating in outcomes research were insufficient time to conduct studies and difficulty reading journal articles due to insufficient knowledge of statistics or ability to interpret findings (2). Eight years later, the same barriers were again identified by RDNs with and without an advanced degree (3). Almost fifteen years later, although research is showing RDNs feel more confident in reading, interpreting, and conducting research, they continue to feel the structures and support needed for success are lacking (R. Hand, personal communication, January 22, 2014).

The Academy has made a significant effort to encourage and educate members on the importance of research, standardized language, and evidence based practice. The House of Delegates conducted a dialogue session in Spring 2002 on the mega issue “The Role of Research in the Profession (4).” From that dialogue session, a motion was approved for the Academy Research Committee to refine a proposed research philosophy (5).
The Academy and its volunteer leaders have been busy not only establishing and refining the research philosophy since the Spring HOD 2002 meeting, but also developing many other resources for RDNs and DTRs to be involved in research, regardless of their practice area. Past HOD dialogue sessions on Nutrition Care Process (Fall 2002 and Fall 2006), Nutrition Informatics (Fall 2008), and Evidence-Based Practice (2009) have supported or resulted in the development of Academy resources such as the Dietetics Practice Based Research Network (DPBRN), the Nutrition Care Process (NCP), the International Dietetics and Nutrition Terminology (IDNT) and the Evidence Analysis Library (EAL®). These resources were developed to support RDNs in both using existing research in their practice and in conducting new nutrition and dietetics research.

As highlighted in previous House of Delegates mega issues and backgrounders, research is not only for one area of practice. Outcomes data are needed for all areas of practice to show their value and clinical outcomes research is essential to the advancement of the field of nutrition and dietetics (2). By providing significant research outcomes, RDNs can increase value, validity, funding, and respect for dietetic practices (3).

### Research and the Dietetic Career Development Guide

Refer to Appendix B to see examples of how research participation is relevant and feasible at every level of practice.
An example of the power of published outcomes research on the role of the RDN was the January 2013, publication in *Managed Care Magazine* that concluded “MNT [Medical Nutrition Therapy] is a valuable adjunct to health management programs that can be implemented for a relatively low cost. MNT warrants serious consideration as a standard inclusion in health benefit plans” (6). The study was a project of the DPBRN and was “the first to evaluate a policy decision by an insurance company to provide coverage for MNT” (6). The Academy Nutrition Services Coverage Team has used the article in several ways to help members with reimbursement issues, such as: including the article in advocacy materials distributed to the Public Policy Panel members at the 2013 Public Policy Workshop, sharing it with numerous affiliates to support their advocacy work around the Essential Health Benefits package for their states and also with Reimbursement Representatives and other Academy members who are working on expanding coverage for MNT services with private insurance companies.

This Backgrounder sets the stage for an informed discussion of the following Mega Issue Question:

**Mega Issue Question:**

How do we mobilize members to commit their time, talent and resources to research?

**Meeting Objectives:**

Participants will be able to:

1. Increase members’ awareness of Academy research resources.
2. Recognize various ways members are utilizing and contributing to research.
3. Develop a plan to empower members (at all practice levels) to use, participate in and/or conduct research to benefit the profession and the public.
4. Identify ways that members can build a professional culture that encourages and embraces research.
5. Advocate for resources to conduct research.

Knowledge-based Strategic Governance is a mechanism for consultative leadership. It recognizes that “strategy” is the necessary and appropriate link in the Board's role to govern the organization, the House's role to govern the profession and the staff's role to manage implementation. To assist you in thinking about the issue to be addressed, four key background areas are presented as standard questions used for each Mega Issue. These questions create an environment of awareness of what we know and what is unknown. A wide range of resources has been used to provide you with what is known.

**Question #1:**

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

**Membership and Research**

At the end of January, 2014 the Academy membership database showed that 1,501 individuals (901 members and 600 non-members) or approximately 1% of our membership indicated their primary practice area was "research." (Note: Since this is self reported data, it may not be an accurate depiction of the marketplace) (7). The Needs Satisfaction Survey and also the Compensation and Benefits Survey are quantitative studies that provide a more dependable analysis of which members are in what practice area. These can both be found in recent issues of the Journal (8-9).
Outsiders’ Perception and Reimbursement

Data from nutrition and dietetics related research can be used for many functions but two primary goals are advocacy for reimbursement of services and improving patient/client and community outcomes (10). Factors influencing the need for RDNs to be involved in research are: the Medicare Medical Nutrition Therapy Benefit and the Nutrition Care Process and Model. In January of 2002, RDNs were granted status as medical nutrition therapy providers by the Centers for Medicare and Medicaid Services (CMS), in the treatment of type 1, type 2, and gestational diabetes mellitus and nondialysis kidney disease, therefore requiring that evidence-based practice be used in clinical decision making.

As instrumental as the Managed Care article has been, one article is not enough. Collecting and utilizing outcomes data in all practice areas is imperative to the advancement of the profession, as seen with the Centers for Medicare and Medicaid Services’ (CMS) decision on Intensive Behavioral Counseling for Obesity. Without sufficient outcomes data on the effectiveness of RDN specific interventions, reimbursement by CMS for services is difficult to achieve.

Members’ Perceptions

As mentioned above, two small studies from 2000 and 2008 described RDNs’ barriers of research participation. In 2006, a study examined a national sample of credentialed, RDNs actively working in clinical, education or research practice areas to identify factors that predicted their involvement in research activities (11). This survey showed that RDNs’ perceptions, attitudes, and knowledge of evidence-based practice and other demographic characteristics predicted their involvement in research activities. Based on the low overall research activity scores and their desire for more research training and education, the RDNs in this study were not likely to rate their research skills as being “up-to-par (11).”

This study was consistent with earlier studies from the late 1990’s and early 2000-“RDNs valued research but were not confident in their skills.” RDNs with doctorates had the highest research scores, whereas RDNs with bachelor’s degrees had the lowest scores. RDNs working in university settings as college faculty scored the highest research scores as a group. Given that greater research involvement and participation occurred when a graduate degree was obtained, the study concluded that modifying the present structure of dietetics education could improve participation in research activities. The lack of research mentors is commonly cited in the dietetics literature as a major barrier for not performing in research activities. Increasing knowledge of and changing attitudes about evidence-based practice will lead to greater research involvement among RDNs (11).

The Academy of Nutrition and Dietetics conducted surveys of active members who are RDNs with a doctorate degree and members of the Research Dietetic Practice Group (RDPG) in 2000, 2002, and 2006 (12-16). Comparing the 2006 research survey results to the 2002 survey showed there has been no increase in the number of active dietetics researchers in the four years between surveys, in spite of the fact that there are now over 300 more doctoral Academy members. In both surveys, there appear to be about 400 active Academy researchers; those who consistently participate in research and publish their findings. A decrease in number of projects per year per active researcher from 1.7 to 1.4 suggests that active Academy researchers may be less involved in research now than previously. This decrease occurred in spite of the percentage of active researchers who initiated two or more projects per year.
In 2011, the Academy conducted another survey of members with a doctorate degree and members of the RDPG with a post-baccalaureate degree (i.e., masters or doctorate degree)(16). It appears most RDNs with doctorates were primarily in teaching roles, while most RDNs with masters were acting as research coordinators (17). The objective of the 2011 Research Survey was to better understand member participation in research defined as: preparing applications/proposals, designing and conducting studies, preparing manuscripts for publication, and presenting at professional meetings, as well as supervising any of these activities. The survey also included questions about funding and the degree to which the RDNs’ research interests correlated to the Academy research priorities. The survey also revealed interesting differences in research activities between RDNs with doctorates and masters. (It is important to note that the 2011 survey had a limited sample size; the invited study population included all 2,320 Research Dietetic Practice Group (DPG) members with email access and post-baccalaureate degree at the time of the sample selection in January 2011. From that 2,320, 727 members responded to the survey) (16).

“Successful implementation of research in practice must have support from leadership including dedicated time and resources. Dietitians need to have time to collaborate with other professions, work with Institutional Review Boards, collect data, and write up results within their daily activities; this can only be done with the support of facility leadership. Furthermore, dietitians must have the self-efficacy to conduct outcomes research. Development of self-efficacy may involve receiving the skills and knowledge (e.g. research competencies) during their pre-professional education or self-learned through continuing education, mentorship, and collaboration as a professional (A. Steiber, personal communication, December 30, 2013).”

The Dietetics Practice Based Research Network (DPBRN) conducted a survey in November 2013 assessing the research knowledge, barriers and needs among Academy members. Over 4000 members from all areas of practice responded. Respondents were generally representative of the Academy’s membership demographics overall. Knowledge of Academy resources for research, including the network, was low. Members recognized the importance of research and generally were interested in getting involved but reported many barriers. Lack of time or support, or a prioritization of other work were identified more frequently as barriers than lack of knowledge or skills. Those who had participated in DPBRN projects did report fewer barriers than those who had not, indicating that this is a viable way to increase research participation in the field. Full numerical results are pending submission as an abstract and manuscript (R. Hand, personal communication, January 22, 2014).

**Pre-Professional Education: Existing Realities**

Since the Report of the 1984 Study Commission on Dietetics, competencies for research have been integrated into core nutrition and dietetics curriculums, thereby preparing future food and nutrition professionals with the knowledge and skills necessary for research involvement (18).

The Accreditation Council for Education in Nutrition and Dietetics (ACEND) standards (19) for didactic programs in dietetics training students to become an RDN include knowledge requirements and competencies related to research. Therefore, all programs need to include learning activities related to research. However it is up to the program to determine what types of experiences and activities they provide to students to address these competencies and knowledge requirements. Currently, ACEND
does not have data on what individual programs are doing to meet the research requirement. This is evaluated by a review team during an on-site visit to the program. There are a few dietetic internships and coordinated programs that have a research concentration.

Skills for a Future-Focused Vision
From the HOD 2012 Fall Meeting dialogue on Moving Forward—A Vision for the Continuum of Dietetics Education, Credentialing, and Practice and the Council on Future Practice’s Visioning Report and Consensus Agreement for Moving Forward the Continuum of Dietetics Education, Credentialing, and Practice (20) the Council on Future Practice (CFP) continues to work in collaboration with the Commission on Dietetic Registration (CDR) and ACEND to project future practice needs for the profession of nutrition and dietetics.

A top priority identified at the Academy’s Joint Meeting of Leaders from ACEND, CDR, CFP, the Education Committee, and the Nutrition and Dietetics Educators and Preceptors Dietetic Practice Group (NDEP DPG) in January of 2013 was defining and differentiating the practice roles of associate degree, baccalaureate degree and graduate degree. This differentiation will be used to prepare nutrition and dietetics practitioners and to develop the knowledge and skills that will be the basis for educational preparation at each level of the continuum. Research competencies will be threaded throughout these levels of education as they are now currently in the didactic programs in dietetics, coordinated programs, and dietetic internship.

The CFP has developed a future-focused (10 years out) vision for a new model of differentiated entry-level nutrition and dietetics practice (operationally defined by CDR as the first three years of practice after registration). The new model for nutrition and dietetics practice proposes scopes of practice consistent with educational preparation and acknowledges that education makes a difference in the roles nutrition and dietetics practitioners are prepared to undertake. The goal of the new model is to prepare graduates from associate, baccalaureate and graduate programs to practice differently, with increased autonomy, greater expertise and more focused areas of practice at the higher level of the educational continuum (21). Research, analysis and outcomes data collection have a strong presence in the new model.
**The Academy’s Research Philosophy**

The Academy uses research as the basis of decisions, policy and communication in a variety of roles. The Academy’s organizational unit roles related to research include: advocating, facilitating, convening, funding, disseminating and educating its members. The Academy accomplishes these roles collaboratively with other scientists and organizations. The following is an explanation of these various research roles:

<table>
<thead>
<tr>
<th>Role</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advocacy</td>
<td>Involves identifying federal and non-governmental agencies/organizations/individuals who can support the Academy’s research agenda. Examples of advocacy roles would be for the Academy to identify research questions for USDA/ERS or the Robert Wood Johnson Foundation, or to testify before congressional leaders on the importance of research funding for data collection and nutrition monitoring.</td>
</tr>
<tr>
<td>Facilitator</td>
<td>Involves targeting key research questions to be answered and facilitating a successful process to answer these questions. For example, the Academy would facilitate partnerships or multidisciplinary collaboration between various researchers to find potential funding sources and conduct the research.</td>
</tr>
<tr>
<td>Convener</td>
<td>Involves convening key scientists and practitioners from various disciplines to explore new approaches in solving dietetics related research questions. Examples might be convening a meeting to discuss research needed to address childhood weight management treatment and prevention.</td>
</tr>
<tr>
<td>Funder</td>
<td>Prepares, disseminates and funds research proposals on key research questions important to the profession. Sometimes this process involves funding for research under RFA or RFP and other times the research is actually conducted in house. The amount of funding is dependent on the availability of internal and external funds.</td>
</tr>
<tr>
<td>Educator</td>
<td>Develops professional development opportunities for members to enhance their knowledge of how to read, interpret, translate, integrate and use research. The Academy also provides professional development opportunities for members to enhance their abilities to conduct high quality research.</td>
</tr>
<tr>
<td>Disseminator</td>
<td>Distributes research results to members and the public through publications, Web sites and print and electronic media (17).</td>
</tr>
</tbody>
</table>
Members

The value proposition of outcomes research is to recognize RDN and DTR exemplary work through the collection of data documenting outcomes and cost-effectiveness of food and nutrition services and generate a return on investment including benchmark data, best practices, and quality outcomes in their organizations and as a profession. These outcomes are critical in demonstrating how RDNs and DTRs improve the nation’s health through food and nutrition (22). Member RDNs requested from the Academy Quality Management Committee that a registry be established for the profession to illustrate the valuable services being provided by RDNs and advance the evidence base for nutrition in areas such as effectiveness, safety and quality. Cost-effectiveness and health outcomes of RDN services utilizing food and nutrition interventions should link RDNs as highly reliable practitioners to the CMS national quality strategy (23).

Members want recognition, enhanced consumer perception, improved quality of service, and to be seen as a positive influence on revenues/reimbursement for the organization. Members need the Academy to be viewed as the premier organization and for RDNs and DTRs to be the respected brand of nutrition and dietetics (23).

Employee Expectations-Workforce Demand Study

In the March 2012 *Journal of Academy of Nutrition and Dietetics* supplement on Workforce Demand, Marsha Rhea and Craig Bettles explain the future scan for RDNs and DTRs for 2012-2022. “Better outcomes research will (also) open up reimbursement for lifestyle and nutrition counseling to prevent expensive chronic diseases (24).” In this new health care system, the focus will shift from the often expensive tasks of treating disease to predicting and preventing disease before it happens (25).

Shifting Intervention Approaches and Changing Practice Roles: Research and Practice

In another article from the Workforce Demand March 2012 supplement, Academy members Jamie Stang and Betsy Haughton discuss trends in health care and changing practice roles. They foreshadow that comprehensive health care reform stipulated in the *Patient Protection and Affordable Care Act* and projections about the future health care workforce have implications for the nutrition and dietetics profession over the long-term (26). Implementation will shift from a fee-for-service payment model to preventive, patient-centered approaches, including the patient-centered medical home and accountable care organization models, and a reformed delivery system with more primary care providers, medical homes, and community-based health centers (27).

Haughton and Stang predict that the overall nutrition and dietetics workforce will need knowledge and skills to participate in primary, secondary, and tertiary interventions across the life course and target different levels of the social-ecological model. The knowledge and skills used, which require critical thinking skills for analysis and decision making for participating in activities such as analyzing research publications, will need to be informed by current research. It also is important to recognize the
important role that some nutrition and dietetics practitioners will have in generating and contributing to this research, which can range from the most basic level (eg, from the genomic, subcellular, cellular, and multiorgan system levels) to that of human behaviors related to eating and physical activity and to that of environments and policy that influence these behaviors (eg, levels of the social-ecological model) (26,28).

### Question #3:
**What do we know about the capacity and strategic position of the Academy in terms of its ability to address this issue?**

#### Academy Research Initiatives

**The Academy’s Research Philosophy**
The Academy believes that research is the foundation of the profession providing the basis for practice, education and policy. Dietetics is defined as the integration and application of principles derived from the sciences of nutrition, biochemistry, physiology, food management and behavioral and social sciences to achieve and maintain people’s health; therefore, nutrition and dietetics research is a dynamic collaborative and assimilative endeavor. This research is broad in scope ranging from basic to applied practice research (15).

Research in nutrition and dietetics is broad so it requires varied research methodology to appropriately address each question. Below is a conceptual model introducing different research methodologies that can be applied in nutrition and dietetics research. In addition, this model highlights how the work of the Academy’s Research, International, and Scientific Affairs (RISA) team integrates into these models and how the EAL, NCP, DPBRN and ANDHII integrate with one another (29).

<table>
<thead>
<tr>
<th>Translational*</th>
<th>Epidemiologic*</th>
<th>Practice-Based*</th>
<th>Quality Improvement*</th>
<th>Evidence Analysis*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academy</td>
<td>Academy</td>
<td>Apply in practice</td>
<td>Implement solution across facility</td>
<td>Identify question</td>
</tr>
<tr>
<td>Identify question</td>
<td>Identify question</td>
<td>Analyze data with research experts</td>
<td>Test more solutions if necessary</td>
<td>Literature search</td>
</tr>
<tr>
<td>Investigate mechanism in lab</td>
<td>Track over time (prospective)</td>
<td>Conduct study in multiple practices</td>
<td>Collect data to see if solution worked</td>
<td>Combine and weigh data</td>
</tr>
<tr>
<td>Animal trials</td>
<td>Gather lots of data (observational)</td>
<td>Work with research experts to design study</td>
<td>Test a solution</td>
<td>Determine answers and gaps</td>
</tr>
<tr>
<td>Clinical trials</td>
<td>Analyze relationships</td>
<td>Identify pattern/ask a question</td>
<td>Engage stakeholders to identify solution</td>
<td>Create practice guidelines</td>
</tr>
<tr>
<td>Application in large medical centers</td>
<td>Test factor as intervention</td>
<td>Practitioner</td>
<td>Collect data to find cause of problem</td>
<td>Guideline implementation</td>
</tr>
<tr>
<td>Application in small facilities</td>
<td>Apply in practice</td>
<td>Practitioner</td>
<td>Identify a problem</td>
<td></td>
</tr>
</tbody>
</table>

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*Question #3:
**What do we know about the capacity and strategic position of the Academy in terms of its ability to address this issue?**
Figure. Comparisons between and connections among the steps in dietetics research models. Footnotes a, b, c, d, and e indicate transition points between different research methods, each of which has the associated footnote in its header row. For example, "Application in large medical centers" indicates that application of the findings of translational research may spur a practice-based research project to determine the effectiveness of the finding in a wider population than was used in a clinical trial, or might be supported by a quality improvement project investigating implementation strategies. Footnote e for Evidence Analysis indicates specifically where in the process a guideline might be developed and implemented. T1=translation 1; T2=translation 2. (Figure used courtesy of J Acad Nutr Diet (29).

Priorities for Research: Agenda to Support the Future of Dietetics

Academy of Nutrition and Dietetics has prioritized specific areas of research necessary to the advancement and practice of the nutrition and dietetics profession. These research priorities have been divided to reflect two categories of research: core research and nutrition and dietetics research. Core research (social, food, nutrition, and basic sciences research) is fundamental to the foundation of the nutrition and dietetics profession and is often accomplished by nutrition and dietetics researchers in collaboration with other researchers in those specific disciplines. Nutrition and dietetics and business research further develop and translates principles from the core research and practice that are used to formulate policies at the individual and national level.

For the 2013 Priorities for Research, research priorities were categorized as to the core area of science and their role in development, provision and management of effective nutrition services which impact nutritional status.

Categories for Research Priorities (14):

The Research Committee, which is comprised of members representing a variety of practice areas and practice settings, in developing this research priorities document, reviewed input from across the Academy membership including the Academy House of Delegates members and their constituents, Dietetic Practice Group leadership and membership, Academy members who are researchers, Academy Board of Directors and external stakeholders and results from the EAL® that reflect areas of nutrition and dietetics needing additional research evidence.

That input was synthesized into the following six priority research areas. The research priorities described in this document serve as the basis for communication and advocacy among stakeholders in the broader research and policy community. The Academy, Academy Foundation and other organizational units act as advocates, facilitators, conveners, educators, disseminators, and to a lesser
degree funders of priority research. An explanation of the roles in relation to the designated priority areas is provided on page 7 of this document (15).

**Academy Research Initiatives**

**Research, International, and Scientific Affairs Team**
The Academy’s RISA team has 4 main tools (ANDHII, DPBRN, EAL® and NCP/IDNT) to help members generate, synthesize and apply research findings. As illustrated in the figured below, these tools work together to generate outcomes data which can be used in advocacy and practice. APPENDIX E provides an updated description of the Academy’s RISA team; including the roles and responsibilities of team members and their contact information.

![Diagram of Academy Research Initiatives](image)

**Research Committee**
The Committee is comprised of twelve Academy members: six voting members and six ex-officio members. The six ex-officio members will represent the Board of Directors, Academy Foundation, CDR, Research Dietetic Practice Group Executive Committee, and the Evidence-Based Practice and Nutrition Care Process-Standardized Language Committees. Members are appointed for three year staggered terms. Committee members represent clinical nutrition, community/public health, management, education, long-term care/aging, and industry practice areas.

**Functions**
- Develops, maintains and evaluates Academy’s research agenda.
- Researches initiatives that support and advance the goals of the strategic plan (30).

**Academy’s Health Informatics Infrastructure (ANDHII)**
An innovative new set of online tools, the Academy of Nutrition and Dietetics Health Informatics Infrastructure, promotes efficient and accurate use of the Nutrition Care Process and the corresponding International Dietetics and Nutrition Terminology (IDNT), helps members track and report on patient outcomes, and collects RDN-impact data for use in public policy and quality improvement research. This tool is called ANDHII (pronounced “Andy”).
The Commission on Dietetic Registration has provided a grant to develop and test this web-based clinical data warehouse, also known as a registry. This tool will fill the member request for a registry.
ANDHII is designed to collect and organize information about patient and client response to nutrition care to demonstrate the value and impact of the RDN, and it is packed with efficiency features including “Intelligent Suggestions” that utilize the IDNT matrices to anticipate which terms members will want to select at each step of the Nutrition Care Process.

ANDHII will provide members with tools to track and report outcomes for individual patients and for your practice as a whole. The tool can be used by researchers, both internal and external to the Academy, to collect and aggregate patient outcome and practice pattern data for use in outcomes research and national quality improvement initiatives (31). See APPENDIX C for a “Quick Look” at ANDHII.

Dietetics Practice-Based Research Network
The Dietetics Practice-Based Research Network (DPBRN) is a network of nutrition and dietetics professionals and students with varying specialties and areas of expertise who are interested in studying and improving patient care. DPBRN is a free benefit of membership in the Academy (32). DPBRN conducts, supports, promotes and advocates research in practice-based settings by bringing practitioners and researchers together to identify research that is needed in practice settings, design top-class research, obtain funding and carry that research out in real-life practice settings. DPBRN projects are funded by DPGs and industry and government grants.

• DPBRN is managed by an Oversight Group made up of dietetics practitioners and researchers from a variety of practice settings. Network staff works with the Oversight Group to determine the research goals of the group and to plan projects.
• DPBRN seeks to bring nutrition and dietetic practitioners and researchers together to answer research questions important to practitioners.
• The DPBRN consists of clinicians, practitioners, researchers and students in a variety of settings and specialties committed to improving patient and client outcomes through practice-based research.

A list of DPBRN project participants is available for members on the Academy web site. Once logged into the website, members can view profiles of these volunteers:
http://www.eatright.org/Members/content.aspx?id=6442477117.

DPBRN Project List
Below is a list (November 2013) of the projects DPBRN is currently involved in conducting with a brief description of each:
• DPBRN Member Needs Assessment—This survey established the perception of the importance of research, knowledge of research methods and the DPBRN’s resources/function, research experience, as well as barriers to conducting research among Academy members. Close to 4000 responses were received and the results will help guide the work of the DPBRN in the future.
• Dietitian Staffing and Productivity Study—This joint project with the Clinical Nutrition Management Dietetic Practice Group will establish current RDN to patient ratios in inpatient care settings. RDNs across the country will record the time they spend on patient care and other tasks throughout the day. These data will be aggregated and used to describe current practices.
• Reliability and Validity Testing of a Checklist for Quality Nutrition Education Programs—This tool, which helps program planners design the best nutrition education programs and funders evaluate proposals, has been validated by a group of 13 DPBRN members who served as reviewers for multiple proposals using the tool. Now that the content is complete, the team has named the tool GENIE (Guide for Effective Nutrition Intervention and Evaluation). This online tool is available to the public for use in planning programs as of January 2014 at: sm.eatright.org/genie.

• My Life: Preventing Breast Cancer Recurrence through a Tailored Lifestyle Intervention—This study is comparing Weight Watchers to a tailored lifestyle intervention lead by RDNs for breast cancer survivors to determine which leads to improved weight loss as well as a decrease in biochemical markers that suggest cancer recurrence. DPBRN members have been trained in motivational interviewing and will administer the intervention.

• Team Approach to Heart Failure: This joint DPBRN/Evidence Analysis Library® project examines the impact of disseminating evidence based practice guidelines via social media. This study will span 3 years and was funded by the Agency for Health Care Quality and Research.

• Malnutrition Clinical Characteristics Validity and Reliability testing: This study, funded by Abbott Nutrition and jointly planed with ASPEN will examine the validity and reliability of the clinical characteristics for diagnosis of malnutrition in adults. The methodology is undergoing pilot testing and we anticipate recruiting over 60 sites to participate in the larger study across the country in fall 2014.

• Diabetes Evidence Based Nutrition Practice Guideline Pilot Study—This project, presented at FNCE 2013, showed significant improvements in HbA1c and diabetes specific quality of life in patients who were treated by a RDN using the evidence-based nutrition practice guidelines for diabetes from pre to post visit. A collaborative study is planned with the DCE DPG to examine how practice changes and if care improves with the release of guidelines for preventing diabetes.

• BMI2 (Brief Motivational Interviewing)—This was a collaborative study with a pediatrician network, PROS, which examined partnerships between pediatricians and RDNs in using motivational interviewing to help overweight children lose weight. Full results are pending from this large study.

Evidence Analysis Library®
The Academy of Nutrition and Dietetics Evidence Analysis Library (EAL®) aggregates existing literature on relevant nutrition and dietetic topics housed within an accessible, online, user-friendly library. An objective and transparent methodology is used to assess food and nutrition-related science. Meticulous methods and electronic tools are used to document each step to ensure objectivity, transparency and reproducibility of the process. Expert workgroup members evaluate, synthesize, and grade the strength of the evidence to support conclusions that answer a precise series of questions (33). The EAL® is guided by the Evidence-Based Practice Committee.

The EAL® web site houses systematic reviews, evidence-based practice guidelines, and toolkits developed from the nutrition and dietetic based systematic reviews. The EAL® systematic reviews are developed by Academy members for Academy members. See APPENDIX D for a list of EAL® projects that have been supported by Academy Dietetic Practice Groups.

In addition, there is an EAL® app for members to quickly access recommendations. The NutriGuides app provides over 300 recommendations from EAL projects and includes the strength of the recommendation. The recommendations are categorized by disease/condition, topic and/or nutrition.
NutriGuides App is available for iPhones and iPads from the iTunes store and for Android products from Google store.

**Nutrition Care Process and International Dietetics & Nutrition Terminology**

The NCP is a holistic, systematic approach to providing high quality nutrition care. Use of a care process provides a framework for the RDN to individualize care, taking into account the patient/client’s needs and values and using the best evidence available to make decisions. Other disciplines in healthcare, including nurses, physical therapists and occupational therapists have adopted care processes specific to their discipline. In 2003, the House of Delegates (HOD) of the American Dietetic Association (ADA) (now the Academy of Nutrition of Dietetics) adopted the NCP in an effort to provide nutrition and dietetics practitioners with a framework for critical thinking and decision-making. Use of the NCP can lead to more efficient and effective care and greater recognition of the role of nutrition and dietetic practitioners in all care settings (34).

With the advent of nutrition diagnosis, work began on the development of a standardized language for the NCP. Through a rigorous process over several years, terms for all four steps in the process (nutrition assessment, nutrition diagnosis, nutrition intervention and nutrition monitoring and evaluation) have been identified, organized and defined. These are available in the IDNT Reference Manual. Using standard terminology allows RDNs in all settings to use the same words to describe things resulting in more precise and effective documentation and communication. Standardized terminology is essential for electronic health records and billing forms. Standardized language will also facilitate legislative efforts. Each term has a reference sheet that defines the term and important information regarding use of the term (34). The NCP/IDNT is guided by the Nutrition Care Process/Standardized Language (NCP/SL) Committee (30).

In 2014, the Academy will publish the next edition of the IDNT Reference Manual. Submissions for changes or additions to the standardized language were due by March 31, 2013. Countries or organizations, in the U.S. and internationally, need not submit as a group (e.g., country, practice or other); individual submissions are welcome. Further, group submissions do not need unanimous support. Majority and minority opinions may accompany the submission. The (NCP/SL) Committee will use its discretion in determining whether to review the submissions received after March 31, 2013 (35).

**Other Related Groups and Resources**

APPENDIX E provides an organizational chart of the RISA team and the new committee structure. Besides the committees already mentioned in this document and seen in APPENDIX E, there are a few other related groups and resources to mention.

**Research Dietetic Practice Group**

*Mission*

The Research Dietetic Practice Group is leading the future of dietetics by promoting the conduct and application of research related to food, nutrition and dietetics.

*Vision*

Research Dietetic Practice Group will provide members with information and networking to allow them to be the valued source for conducting, interpreting, and applying research related to food, nutrition, and dietetics.
**Strategic Plan Goals**

- Build an aligned, engaged, and diverse membership.
- Influence key food, nutrition and health initiatives.
- Impact the research agenda and facilitate research supporting the dietetics profession.
- Promote nutrition and dietetics research activities at Clinical and Translational Science Award centers.
- Increase demand and utilization for services provided by members.
- Empower members to compete successfully in a rapidly changing environment.
- Proactively focus on emerging areas of food and nutrition (36).

**Nutrition Informatics Committee**

The Nutrition Informatics Committee is a committee of eight members (including immediate past-chair in ex-officio role) who represent the areas of practice with expertise in nutrition informatics and areas which are impacted by recent health information technology adoption efforts in the United States. Members are appointed for three-year staggered terms. NIC is staffed by members of the Policy, Advocacy and Initiatives Team and works closely with the RISA team on informatics related questions around NCP/IDNT and ANDHII.

**Functions**

- Coordinate all of the Academy’s nutrition informatics efforts in conjunction with the Director, Nutrition Informatics.
- Expand and implement the Program of Work for the Nutrition Informatics Committee.
- Support the Program of Work and tasks of the Interoperability & Standards Sub-Committee.
- Support the mission and scope of the Consumer Health Informatics Work Group.
- Ensure consistent and frequent informatics related communication and collaboration inside and outside of the Academy (30).

**Journal of the Academy of Nutrition and Dietetics**

While generating new research data is important, disseminating and implementing those findings is the other half of the equation. The Journal serves as an important platform for dissemination of findings, and can also be a resource for learning about topics and methodologies for future research.

Below is a quick list of Academy resources available for members.

**Academy Resources**

1. Website: [http://www.eatright.org/research/](http://www.eatright.org/research/)
2. Evidence Analysis Library: [http://andevidencelibrary.com](http://andevidencelibrary.com)
Nutrition and dietetic professionals are responsible to incorporate research into all areas of practice. Both the Code of Ethics (37) and Standards of Professional Practice (38, 39) identify the roles of nutrition and dietetic practitioners in research. The Code of Ethics states that the dietetic professional practices are based on scientific principles and current information. The Standards of Professional Practice states that each nutrition and dietetics practitioner effectively applies, participates in or generates research to enhance practice (16).

Whenever we consider gathering outcomes we must consider the role of Health Insurance Portability and Accountability Act (HIPAA) and Institutional Review Boards (IRB) in this work. Both are complex rules which may be overwhelming. However, both are important in the protection of the patient and/or research subject, a goal which falls in line with our Code of Ethics. Consult an expert, including the Academy’s RISA staff when questions on the necessity of IRB arise.

The Health Insurance Portability and Accountability Act of 1996
The HIPAA Privacy Rule provides federal protections for individually identifiable health information held by covered entities and their business associates and gives patients an array of rights with respect to that information. At the same time, the Privacy Rule is balanced so that it permits the disclosure of health information needed for patient care and other important purposes, generally with the patient’s written permission (40).

Institutional Review Boards
An IRB is a group that has been formally designated to review and monitor biomedical research involving human subjects. An IRB has the authority to approve, require modifications in (to secure approval), or disapprove research. This group review serves an important role in the protection of the rights and welfare of human research subjects.

The purpose of IRB review is to assure, both in advance and by periodic review, that appropriate steps are taken to protect the rights and welfare of humans participating as subjects in the research. To accomplish this purpose, IRBs use a group process to review research protocols and related materials (e.g., informed consent documents and investigator brochures) to ensure protection of the rights and welfare of human subjects of research (41).
One requirement of most IRBs is that any study staff who are consenting patients must be trained in the ethical conduct of research, commonly called Human Subjects Protection Training. This can be a barrier to RDNs conducting research or participating in network projects. However, the Academy is working with experts in this area develop resources to make this training relevant and valuable to nutrition professionals ((R. Hand, personal communication, January 22, 2014). This work will also develop resources around determining when IRB approval is needed and how to obtain it. Please look for this information on www.eatright.org/members/dpbrn.

**Conclusion:**

As stated in the January 2014 article published in the Journal, “research allows us to move the profession and the provision of care in nutrition and dietetics forward as an evidence-based practice. Input on research is needed from RDNs in all settings and specialist practice: academia, practice, business, industry, management and new yet unidentified areas. While research may be intimidating if one only considers epidemiology and translational research, practice-based research, quality improvement projects, evidence analysis and Practice Based Guidelines are all crucially important in developing the research evidence behind the practice of nutrition and dietetics. The Academy strives to support the needs of RDNs and students at all levels of research experience and in all areas of research (42).”

Identifying strategies for member engagement research is critical to understanding and promoting research among nutrition and dietetic professionals (16). The Academy strives to generate resources but needs the time, talent and practical expertise of members to move the agenda forward and generate data for reimbursement and advocacy.
REFERENCES:
39. Academy of Nutrition and Dietetics Quality Management Committee and Scope of Practice Subcommittee of the Quality Management Committee. Academy of Nutrition and Dietetics:


Appendix A:
Glossary of Terms

Academy’s Health Informatics Infrastructure (ANDHII): An innovative new set of online tools; promotes efficient and accurate use of the Nutrition Care Process (NCP) and the corresponding International Dietetics and Nutrition Terminology (IDNT), helps members track and report on patient outcomes, and collects RD-impact data for use in public policy and quality improvement research.

Dietetics Practice-Based Research Network (DPBRN): a network of dietetics professionals and students with varying specialties and areas of expertise who are interested in studying and improving patient care. DPBRN is a free benefit of membership in the Academy.

Evidence Analysis Library (EAL®): aggregates existing literature on relevant nutrition and dietetic topics housed within an accessible, online, user-friendly library. The EAL® website houses systematic reviews, evidence-based practice guidelines, and toolkits developed from the nutrition and dietetic based systematic reviews. The EAL® systematic reviews are developed by Academy members for Academy members.

International Dietetics and Nutrition Terminology (IDNT): With the advent of nutrition diagnosis, work began on the development of a standardized language for the NCP. Through a rigorous process over several years, terms for all four steps in the process (nutrition assessment, nutrition diagnosis, nutrition intervention and nutrition monitoring and evaluation) have been identified, organized and defined. These are available in the IDNT Reference Manual. Using standard terminology allows dietitians in all settings to use the same words to describe things resulting in more precise and effective documentation and communication. Standardized terminology is essential for electronic health records and billing forms. Standardized language will also facilitate legislative efforts. Each term has a reference sheet that defines the term and important information regarding use of the term.

Nutrition Care Process (NCP): a holistic, systematic approach to providing high quality nutrition care. Use of a care process provides a framework for the RDN to individualize care, taking into account the patient/client’s needs and values and using the best evidence available to make decisions. Use of the NCP can lead to more efficient and effective care and greater recognition of the role of nutrition and dietetic professionals in all care settings (32).

Research, International, and Scientific Affairs Team (RISA): Academy research department
Dietetics is the integration, application and communication of principles derived from food, nutrition, social, business and basic sciences, to achieve and maintain optimal nutrition status of individuals through the development, provision and management of effective food and nutrition services in a variety of settings.
APPENDIX C:
Academy of Nutrition and Dietetics Health Informatics Infrastructure (ANDHII)-A Quick Look

- System of tools to support collection, management, and analysis of data built on a flexible framework able to support any Nutrition Care Process based data
- Provides clinical decision support for fast and easy progression through NCP and standardized language
- ANDHII facilitates the translation of clinical practice into research data by using the Nutrition Care Process and IDNT

USES of ANDHII
- For Members: outcomes collection and demonstration for individual practitioners, clinical nutrition managers, facilities, and organizations
- For the Profession: national quality improvement database, comparative effectiveness research, and RDN/DTR impact studies
- For Research: Data collection and management for research projects

User Interface
- Thoughtful, efficient user interface
- Minimize loading times, unnecessary clicks, and number of choices at each step
- Respect clinician autonomy
- Always allow user overrides when using clinical decision support
- Design system to provide value to user
- Translate input into custom formatted ADIME note ready for copy/paste into most medical records
## APPENDIX D:
### List of Dietetic Practice Groups that Support the Evidence Analysis Library®

<table>
<thead>
<tr>
<th>EAL® Project</th>
<th>DPG</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Illness</td>
<td>Dietitians in Nutrition Support DPG</td>
<td>2006 project</td>
</tr>
<tr>
<td>Spinal Cord Injury</td>
<td>Dietitians in Physical Medicine and Rehabilitation Practice DPG</td>
<td></td>
</tr>
<tr>
<td>Bariatric Surgery</td>
<td>Weight Management DPG</td>
<td>WM DPG funded the first DPG supported project and is providing funding for the update.</td>
</tr>
<tr>
<td>Vegetarian</td>
<td>Vegetarian Nutrition DPG</td>
<td></td>
</tr>
<tr>
<td>Malnutrition in Pregnancy</td>
<td>Women’s Health DPG</td>
<td>Project not started</td>
</tr>
<tr>
<td>Celiac Disease</td>
<td>Medical Nutrition Practice DPG</td>
<td>Partial sponsorship</td>
</tr>
</tbody>
</table>
APPENDIX E:
International Research and Scientific Affairs Staff Members and Roles

New RISA Committee Structure

* Chairs of these three committees (which are jointly appointed by BOD and HOD) sit on the Research Council