WELCOME TO NFEF RESEARCH PRIORITIES—your guide to the research agenda and priorities of the Nutrition & Foodservice Education Foundation (NFEF).

The NFEF was re-launched with a new mission and strategic focus in 2012. Our overarching goal is to serve as a center for new thinking and innovation in the nutrition and foodservice industry—helping the profession grow and adapt in an environment of change. In an ever more complex and globally interconnected setting, nutrition and foodservice professionals face new challenges every day. Our role is to help them navigate these challenges, by advancing new ideas and best practices for tomorrow.

At the heart of this new effort is the need for solid research and discovery. In order to prepare for the future and move our profession in new directions, we must better understand nutrition and foodservice trends and issues. We need empirical data about foodservice management, professional skills development, workforce planning, nutrition and health outcomes, marketplace and customer trends, and a host of other factors that will impact the future of every nutrition and foodservice professional in the United States. And, importantly, we need much more data on the unique role of the nation’s certified dietary managers (CDMs)—data that can help ensure that this essential position in nutrition and foodservice is elevated and advanced.

With that need in mind, we are delighted to present the NFEF’s first-ever research agenda, a document that outlines the research priorities that will shape our work as we pursue our new mission. As you will learn in this report, our research agenda was developed by surveying a wide range of working professionals—CDMs, educators, researchers, administrators, executives and others—who helped us understand today’s most pressing topics and unfilled research needs.

More than 500 individuals participated in this process representing the breadth of the settings that employ CDMs and the variety or roles CDMs perform. This yielded scores of topics and ideas, which have been consolidated and prioritized into the five categories presented here. We deeply appreciate the input of these professionals, whose insights have been invaluable.

On behalf of the NFEF Board of Trustees, we invite you to join us in our quest to strengthen our profession for tomorrow. We look forward to your partnership in advancing these research priorities.
As the NFEF Board of Trustees evaluated the results of the Technomics report outlining emerging dining trends in long-term care and began to consider next steps in follow-up research and data collection efforts, it became clear that there was a need to have a future research roadmap to guide the decisions. The Board created a Research Roadmap Task Force composed of members that represented key stakeholder groups within the ANFP membership: experienced educators/researchers, corporate partners and practicing CDMs from a variety of settings (e.g. long-term care/nursing homes, hospitals, assisted living, schools and other settings). They were asked to provide a summary document that identified the research topics in priority order that are needed to support the future practice, education and advocacy for members of the Association of Nutrition & Foodservice Professionals (ANFP).

At its first gathering the task force created a list of research topic areas, which were organized into four broader categories: Food Management Research, Education and Retention Research, Health and Outcomes Research and Market Research. A short description of each research category and several examples of specific research questions were developed for each research category.

To gather input from ANFP members and other key stakeholders outside the ANFP membership, an online survey was developed and distributed between March and April of 2014. The task force customized personal invitations to ensure survey participation from stakeholders beyond the membership. Input was collected from long-term care administrators, preceptors, foodservice contract management and nursing home chain executives and dietary manager training program educators. The survey asked participants to rate the category descriptions and examples of specific research questions for clarity, importance, and appropriate roles for both ANFP and NFEF. In addition, participants were asked to identify new specific research questions within each category, as well as any other research questions that didn’t fit into the pre-existing categories. They were asked to rank the research categories for importance to current practice and to future practice. More than 500 individuals completed the survey and provided input.

ADDITIONAL RESEARCH

An additional 194 research ideas were generated by survey participants. These were reviewed, synthesized and used to separate market research into two separate categories (resident/client satisfaction and marketing CDMs), to create more clear descriptions and titles of existing research categories, and to provide additional specific research question examples.

1. Emerging Dining Trends in Long-Term Care White Paper. Available at www.NFEFoundation.org
THIS DOCUMENT will be used to determine which future research initiatives are developed and funded by the NFEF.

This document includes the categories listed in priority order. The lists of specific questions are separated into those of the highest priority and those that are important. The following research categories are presented in priority order as being important to both current and future practice:

**Value Proposition of CDMs**—Includes research to understand the value proposition offered by certified dietary managers from employers and stakeholder perspective.

**Recruitment, Education, Role Delineation, and Retention of CDMs**—Includes research on the outcomes of education programs, role delineation for CDMs, entry level and continuing education requirements for CDMs, and best practices for recruitment and retention of CDMs.

**Foodservice Management Research**—Includes food systems operational parameters, management activities and skills, best practices in food production and service management, and departmental financial operating parameters used by CDMs.

**Impact of CDMs on Health Outcomes**—Includes health outcomes most critical to long-term and residential care, e.g. brain function, quality of life outcomes, nutritional quality of residential care diets.

**Resident/Client Customer Satisfaction**—Includes impact of factors (e.g. types of menus and dining service on resident/client satisfaction or employment of CDMs on resident/client customer satisfaction), best practices for tools and measurement of resident/client customer satisfaction use of data in decisions made by CDMs.

The resulting research priorities were presented to both the NFEF Board of Trustees and ANFP Board of Directors for their input and adoption. The document is intended to be used by both NFEF and ANFP as they determine which future research initiatives are developed and funded, by the NFEF as they gather funding support for future research, and by other stakeholders, e.g. academic researchers, as they deliberate about what type of research to support.
ROLE OF RESEARCH FOR CDMS

Research and data decision-making are hallmarks of CDM practice. Research is defined as investigation or experimentation aimed at the discovery and interpretation of facts, revision of accepted theories or laws in the light of new facts, or practical application of such new or revised theories or laws. Research comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications. It is used to establish or confirm facts, reaffirm the results of previous work, solve new or existing problems, support theorems, or develop new theories. Research can be descriptive (seeking to answer “what” currently exists) and experimental (seeking to answer “how and why” factors cause specific outcomes). Research occurs along a continuum—from asking a question and collecting and analyzing data for purposes of quality improvement, to descriptive survey research, to very formal experimental trials comparing two different interventions.

"THANK YOU! This cutting-edge research and demonstrated innovations will help me to advance my foodservice operations and establish the culture of choice in my dining room."

—Emerging Dining Trends in LTC Webinar attendee

Each CDM has the responsibility to find and use appropriate research and data to support daily practice decisions. The research results and data can be published in peer review research journals or owned and provided by the professional organizations, ANFP and NFEF, or gathered locally by CDMs using accepted data collection methods.

**USE OF RESEARCH**

Research will be used to improve CDM’s practice and to improve the regulatory guidance by using research to support advocacy positions. Research can also be used to communicate what CDMs contribute to the well-being of the families and to resident/client satisfaction. External stakeholders use research for food product development, computer or IT applications, tools for CDMs, and development of continuing education programs.

It is not enough to use research produced by others outside the CDM profession to keep current and identify emerging opportunities. If CDMs believe they should have a role in shaping their future, there are certain research topics that CDMs must initiate, contribute to, and own. The input from more than 500 ANFP members and stakeholders has been distilled into the Research Roadmap for CDMs. Using research priorities to create data can put CDMs in the driver’s seat as the practice continues to evolve in the changing healthcare and work environment.

The CDM’s academic and supervised practice education provides the basic skills needed to apply research and data in practice. CDMs are strongly encouraged to seek enhanced skills in how to effectively use research in daily practice through continuing education opportunities.

Effectively finding and using research by CDMs will help them be successful in their work setting, be satisfied with their contribution to the organization and resident/client, have peace of mind by knowing that decisions are made on data, and ultimately enhance the well-being of the resident/client. New research findings regarding factors that enhance quality of life for residents can be used to create new media opportunities and visibility for CDM’s contributions.

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KNOWING IS NOT ENOUGH. It is up to each CDM to use the research findings and incorporate it into how you do your job every day.
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1. Value Proposition of CDMs

The first area of research is market research that informs understanding of the value proposition for employment of CDMs from the perspectives of employers and other stakeholders (e.g., families of residents, vendors, and the general public). Research will lead to identifying the most effective way to address the image and perceptions of CDMs. Research questions in this area follow:

Value Proposition of CDMs Research Priority Questions

1. What are the employer value proposition and future employment opportunities for the CDM in their operations (e.g., why do they hire a CDM versus other managers and will that change in the future)?

2. What are various stakeholders’ perceptions of the CDM’s abilities, skills, contribution to the organization, and the optimal role of the CDM (e.g., employers from various settings, client/customers, families of residents)?

3. What is the most effective way to educate the public and employers on the role and value of the CDM?

4. Is there a difference in client satisfaction and risk management in facilities that employ CDMs compared to those who do not employ CDMs?

Another important question in this research category is:

a. What is the most effective way for CDMs to continually monitor and meet existing and future residents’/families’ expectations?

2. Recruitment, Education, Role Delineation, and Retention of CDMs

Another priority for research is to increase our knowledge about the recruitment, education, roles, and retention of CDMs. The needed research includes descriptive research of the outcomes of education programs, role delineation of CDMs and other dietetics practitioners, descriptions of entry level and continuing education needs, and identification of best practices for recruitment and retention of CDMs. Within this research category the following four research questions should receive the highest priority:
Recruitment, Education, Role Delineation, and Retention of CDMs

Research Priority Questions

1. What are best practices in career advancement and career laddering?

2. Are the leadership attributes and skills of CDMs different from other comparable department managers (what is unique to CDMs)? Do leadership attributes and skills of CDMs vary by settings, environmental pressures or by level of practice/leadership? Do CDM’s leadership attributes and skills differ in advanced practice?

3. What other management opportunities are being offered to CDMs based on their managerial expertise (e.g. multi-department management, laundry, and housekeeping)? What leadership attributes and skills predict those CDMs that are offered promotions to multi-department management?

4. What is the optimal role of CDMs in clinical care, relationship with RD and other healthcare team members, nutrition-related interventions, clinical charting/medical record documentation, and various settings?

Other important questions in this research category (not in priority order) are:

a. Are there salary/compensation differences by geography, educational level, employment setting, job titles?

b. What are the demographic characteristics of CDMs who are leaving the profession? What is the net impact of those leaving the profession on availability of CDMs to meet manpower demands? Why are CDMs leaving the career field or discontinuing the credential?

c. What is the pathway for entering the CDM career field (e.g. where are newly-credentialed CDMs coming from)?

d. At what step in the education and credentialing process are we losing newly-recruited CDMs?

e. What are the various types of jobs held by CDMs and various time-points in their career (e.g. entry level, 5-7 years, 8-15 years, 16+ years)?

f. What are the current employment patterns for CDMs in various settings (multi-department management)?

g. What is the current career pathways represented in the CDM (entry, educational and employment pathways to broaden knowledge and prepare for next tier of work)?

h. Is CDM’s knowledge comparable (same, greater or lesser) to individuals with other types of qualifications (e.g. ServSafe® certifications, DTR, RD, Chefs)?
i. What methods did CDMs use to develop leadership skills (e.g. academic, training, hands-on experiences, mentors)?

j. What type of education/training is needed for them to achieve success as entry level CDMs?

k. What are additional educational opportunities that will best prepare CDMs for future job opportunities?

3. Foodservice Management Research

Research surrounding the prevailing area of practice for CDMs should receive the next highest research priority. Research in this area includes food systems operational parameters, management activities and skills, best practices in foodservice management, and departmental financial operating parameters used by CDMs. Within this research priority area the following three questions should receive the highest priority.

Foodservice Management Research Priority Questions

1. What are the most common methods used by CDMs to manage and control budgets and staffing and operational parameters?

2. What are the costs and benefits related to the various styles of dining trends (e.g. financial parameters and client satisfaction)?

3. How can CDMs effectively incorporate the value of their dining service into overall organizational marketing to influence the selection of the facility by future residents and families?

Other important research questions in this research category (not in priority order) are:

a. What is impact of hiring chefs on financial parameters and client satisfaction?

b. What is the best change management strategy when changing dining room operations or re-designing menus?

c. What type of financial, operational and client satisfaction data are CDMs using; what is the source of the data (e.g. corporate, vendors, or self-generated); and what and how are decisions being made with the data?

d. What are the current financial operating parameters used and monitored for various types of organizations/settings?

e. What is the comparative cost and benefit of various styles of dining?

f. What are the advantages/benefits and challenges/disadvantages/risks of cross training staff?

gh. What are the implications of dining trends or resident preferences (e.g. ethnic foods, organic, locally grown, green, selection of vendors, and training of employees)?

h. What is the impact of technology on managerial parameters, bottom line, and productivity?

i. What is the best way to effectively add or incorporate unfamiliar foods and achieve acceptance by residents/clients?

j. What is the optimal method of determining staffing requirements (e.g. contract vs in-house, staffing for various levels of personal care, in various settings)?
4. Impact of CDMs on Resident/Client Health Outcomes

The fourth research priority deals with establishing a link between the presence of a CDM and the activities of the CDM on the health outcomes of the residents/clients in various settings. Research in this category includes health outcomes most critical to long-term and residential care (e.g., brain function and overall quality of life outcomes), and nutritional quality of residential care diets. The top three questions are:

**Impact of CDMs on Resident/Client Health Outcomes Research Priority Questions**

1. Are different dining services (e.g. hotel style, room service, dining room, buffet, plated meals, trayless delivery) related to overall quality of life measures for residents/clients?
2. Do facilities that employ a CDM have different numbers and types of deficiencies on the new CMS inspections (Quality Assurance Performance Indicators)?
3. Do results from new resident/client nutrition assessment tools document the need for CDM roles (e.g., impact of CDM on compliance with regulatory requirements)?

Other important questions in this research category (not in priority order) are:

a. What is the impact of CDM on the food/nutrition-related brain functional health outcomes in long-term care?

b. What is the impact of the CDM’s activities on health outcomes in various employment settings (long-term care, hospitals, acute care, schools, jails and other institutions)?

c. What is the role of food/nutrition on health outcomes of interest?

d. Do meals consumed by residents in facilities with CDMs have a higher nutritional quality than resident meals in facilities without CDMs?

e. What is the impact of strict vs liberal intake on health-related outcomes (e.g. nutritional intake, functional status, blood pressure control, diabetes control, other health outcomes and resident/client satisfaction)?

5. Resident/Client Customer Satisfaction

Like many of the research categories where research questions can be placed into more than one category, resident/client customer satisfaction could be a part of other research categories; however, since it was deemed to be so important, it was included as a separate category. Research in this topic area includes impact of factors, e.g. types of menus and dining service on resident/client satisfaction or employment of a CDM on resident/client customer satisfaction, best practices for tools and measurement of resident/client customer satisfaction use of data in decisions made by the CDM.

**Resident/Client Customer Satisfaction Research Priority Questions**

1. What are best practices and tools for measuring and assessing resident/client satisfaction in various settings?
2. What factors (types of service, dining service, types of systems for placing residents’ food orders) appear to relate to changes in resident/client satisfaction in various settings?
3. Does satisfaction vary between organizations that hire a CDM vs those without a CDM?
4. What are best practices for responding to results from resident/client satisfaction survey results?
About the NFEF’s New Educational Activities

The professional environment for nutrition and foodservice management in the United States is rapidly changing—and the new and improved Nutrition & Foodservice Education Foundation (NFEF) is helping the profession stay ahead by fostering innovative thinking, cutting-edge research and new ideas.

Our highest priorities are research and education. We encourage and reward nutrition and foodservice leaders and organizations that are helping our profession adapt, grow and change. We share their ideas and knowledge to benefit those we serve and to ultimately achieve a healthier society.

The new NFEF fosters new thinking, experimentation, and innovative concepts in nutrition and foodservice management via grants and funding support. We raise awareness of these ideas through special educational offerings and scholarships for professional development.

And in all of its work, the NFEF is raising the visibility and value of the certified dietary manager (CDM) credential. Those who earn a CDM credential are key to our profession’s future—and we are committed to helping them succeed.

How the NFEF Works With ANFP

The NFEF plays a critical role in helping ensure that ANFP members—as well as nutrition and foodservice professionals in general—are in the know about important trends and developments that are heading their way and helping them to be prepared as the workplace continues to change.

In this way, the NFEF serves as an innovation center, helping ANFP anticipate the new era of nutrition and foodservice that its members must be ready for.

While ANFP offers wide-ranging support to help its members succeed in today’s demanding nutrition and foodservice environment, the NFEF provides support to help them adapt to the profession they will experience tomorrow.

ANFP accomplishes its educational role by offering a wide variety of educational resources—books, webinars, credentialing, training and more—aimed at the day-to-day needs of nutrition and foodservice professionals; hosting educational sessions, conferences and annual meetings; and publishing the profession’s leading magazine.

The NFEF accomplishes its educational role by funding research on emerging trends and key issues; helping fund innovative and promising initiatives that strengthen the profession and promote a healthier society; sponsoring conferences and special events that draw attention to new ideas; and providing scholarships to support the education and training of talented innovators, leaders and young professionals with promise.
THE ROAD YOU ARE ON determines your destination.

FOR MORE INFORMATION please visit www.NFEFoundation.org