Practice Paper of the Academy of Nutrition and Dietetics:

The Role of Nutrition in Health Promotion and Chronic Disease Prevention

ABSTRACT
Food intake, lifestyle behaviors, and obesity are linked to the development of chronic diseases such as type 2 diabetes, certain cancers, and cardiovascular diseases. It is recognized that physical and social environment influences individuals’ behaviors, and some population subgroups such as racial/ethnic minorities and individuals with low socioeconomic status or limited literacy or language abilities seem to be especially vulnerable to disparities in disease risk factors, disease prevalence or health outcomes. Certain life cycle phases appear to be especially important for health promotion and disease prevention as the development of chronic diseases can take several decades. Such complex health issues often require system-wide, multifactorial, and multidisciplinary solutions. Social ecological models, with approaches spanning from individual level to macro policy level can provide registered dietitians (RDs) and dietetic technicians, registered (DTRs) with a comprehensive framework to promote health and to prevent chronic diseases. Furthermore, the Nutrition Care Process can be utilized in carrying out the health promotion and disease prevention efforts. RDs and DTRs have the training and requisite skills to be leaders and active members of multidisciplinary teams to promote health and prevent chronic diseases across the lifespan. The position of the Academy of Nutrition and Dietetics states that primary prevention is the most effective, affordable method to prevent chronic disease, and that dietary intervention positively impacts health outcomes across the lifespan. RDs and DTRs are critical members of health care teams and are essential to delivering nutrition-focused preventive services in clinical and community settings, advocating for policy and programmatic initiatives, and leading research in disease prevention and health promotion. In concordance with the Academy’s position, this practice paper provides an overview of practice examples, effective program components, and a comprehensive range of health promotion and chronic disease prevention strategies for RDs and DTRs. This paper supports the “Position of the Academy of Nutrition and Dietetics: The Role of Nutrition in Health Promotion and Chronic Disease Prevention” published in the July 2013 issue of the Academy of Nutrition and Dietetics.

THE NEED FOR HEALTH PROMOTION AND CHRONIC DISEASE PREVENTION
This paper supports the “Position of the Academy of Nutrition and Dietetics: The Role of Nutrition in Health Promotion and Chronic Disease Prevention” published in the July 2013 Journal of the Academy of Nutrition and Dietetics.1 Food intake patterns, lifestyle behaviors (eg, physical activity and cigarette smoking), and body weight status are associated with the development of chronic diseases such as type 2 diabetes, certain cancers, and cardiovascular diseases (CVD).2 Despite the widespread presence of these health issues around the nation, population subgroups such as racial/ethnic minorities and individuals with low socioeconomic status (SES) or limited literacy or language abilities seem to be especially vulnerable to disparities in disease risk factors, chronic disease prevalence, health care, and health outcomes.1,3

Certain life cycle phases appear to be especially important for health promotion and chronic disease prevention (HPDP). Although the majority of the chronic diseases are diagnosed at older ages for adults, many of these diseases with strong ties to nutrition and lifestyle take decades to develop and can begin during infancy or be linked to intrauterine environment or mother’s reproductive years.4 Therefore, optimal nutrition throughout all phases of life, especially for the population groups that are at high risk for health disparities, must be the primary focus of health promotion and disease prevention (HPDP) efforts of registered dietitians (RDs) and dietetic technicians, registered (DTRs).

HPDP FRAMEWORK FOR RDs AND DTRs
HPDP can be implemented at primary (ie, targeting the disease risk factors), secondary (ie, preventing the onset of disease among those who have the risk factors or are at early stages of the disease), or tertiary (ie, preventing or managing the complications among those
with diagnosed disease) levels. Whether it is a primary, secondary or tertiary prevention, ideal HPDP approaches should be multifactorial, encompass both individual and environmental determinants of health and disease and should involve a diverse team of practitioners including RDs and DTRs as pointed out in the National Diabetes Education Program guidelines.

Because individuals’ behaviors are influenced by the physical and social environment, social ecological models can provide a useful framework for HPDP. Although many variations of social ecological models have been developed over the years, the common characteristics of these models are the emphasis on examining both the individual and environmental disease risk factors and knowing that there is a continuing interaction between these factors which can lead to synergistic effects on the outcomes of interest.

Within a social ecological model, factors influencing health and chronic disease risk can be organized into intrapersonal, interpersonal, institutional, community, and macro public policy levels (see Figure 1). Because of this multidimensionality involving both individual and environmental factors, social ecological models are readily applicable to the multifactorial health promotion and chronic disease prevention efforts. Effective HPDP approaches can address multiple factors at the various socio-ecological levels, but not all interventions require simultaneous action at all levels. For example, some interventions may be most effective at the macro public policy level (eg, food labeling or food advertisement policies) for a population-wide impact influencing various segments of a population and potentially leading to behavior changes at multiple levels.

**Social Ecological Model and Nutrition Care Process**

The Academy of Nutrition and Dietetics’ Nutrition Care Process (NCP), which is aimed to help credentialed nutrition and dietetics practitioners provide consistent, safe, and effective nutrition care, can be a useful tool for HPDP efforts. The four steps of the NCP—nutrition assessment, nutrition diagnosis, nutrition intervention, and nutrition monitoring and evaluation—can be implemented by RDs and DTRs in the community, institution, or clinical settings. Although RDs and DTRs are mentioned collectively throughout this practice paper, it is implied that DTRs work under RD supervision in many (such as clinical) settings.

The combination of the NCP and social ecological model can provide RDs and DTRs with a comprehensive framework to be able to address the wide range of individual and environmental factors that are linked to promoting health and preventing disease (see Figure 1). For example, intrapersonal or interpersonal level approaches may involve assessing knowledge and behaviors (ie, nutrition assessment of NCP), determining the behavioral issues (ie, diagnosis), delivering appropriate educational services (ie, intervention), and evaluating and following up on the progress (ie, monitoring and evaluation) for individual or family-focused nutrition education services.

The community or institution level approaches may involve the assessment of access to food outlets, community-wide surveys, local statistics about food intake or physical activity patterns, or inventory of related policies (eg, school wellness policies) as a part of the nutrition assessment step. Nutrition diagnosis may include the problems such as limited access to food in the community or food and nutrition-related knowledge deficit of the school personnel. Similar to the individual level applications, diagnoses can be stated to indicate the problem (eg, inadequate oral intake), possible etiology (eg, lack of, or limited access to, healthy food choices), and the defining characteristics (eg, local statistics for food intake, availability and food store distribution). One of the significant differences between using the NCP for individual versus community or institution level statements would be the etiology section of the diagnosis. Because of the multifactorial nature of most community level nutrition issues, singling out one specific etiology may not be possible or appropriate. The nutrition intervention phase of the NCP for community or institution level approaches would involve the designed solutions such as nutrition education and nutrition counseling for the food service and administrative personnel to facilitate healthier purchasing and preparation practices and policies to increase access to healthy food choices. Reviews of various interventions from the Evidence Analysis Library of the Academy of Nutrition and Dietetics can be a very useful tool to select the appropriate evidence-based interventions.

**Monitoring and evaluation**, including the documentation of all the processes, analyses and reporting of the outcomes through local, state and national nutrition surveillance systems are vital for the success of community or institution level interventions. Active involvement of the community or organizational members in every phase of the NCP is vital to the success and sustainability of these approaches. Just like the individually tailored solutions that actively engage the patients to take action towards behavior change, active participation serves a similarly critical purpose in community or institution level interventions.

**AN EXAMPLE OF USING THE SOCIAL ECOLOGICAL MODEL AND NCP**

**Evidence-Based Breastfeeding Promotion: The Baby Friendly Hospital Initiative and Breastfeeding Peer Counseling**

The Baby Friendly Hospital (BFH) Initiative is an effective translational tool to promote breastfeeding in maternity wards. In addition, the majority of the research evidence
indicates that breastfeeding peer counseling improves rates of breastfeeding initiation, duration, and exclusivity. The following is an example of incorporating the social ecological framework and four steps of the NCP into breastfeeding promotion through BFH and breastfeeding peer counseling initiatives. The standard terminology from the International Nutrition and Dietetics Terminology Reference Manual has been used where applicable.

**Nutrition Assessment.** Intrapersonal and interpersonal levels: as a part of the health care team, RDs/DTRs can assess the women's knowledge, beliefs, and intentions about breastfeeding, and availability of support from father/family, and perceived barriers to breastfeeding (Figure 2).

**Institution and community levels:** RDs/DTRs can assess the breastfeeding rates, related cultural background and beliefs of the target community through direct surveys and published literature. Identifying the community agencies that can provide breastfeeding-related support (eg, Special Supplemental Nutrition Program for Women, Infants, and Children [WIC] or La Leche League) should also be a part of the community assessment. Identifying the hospital’s BFH status, its policies (including those that apply to its employees) and practices, such as the availability of peer counseling programs or other practices that may act as barriers, serve as institution level assessments.

**Macro public policy level:** RDs/DTRs can identify and review the national guidelines and recommendations related to breastfeeding and BFH strategies and state or federal regulations that may affect breastfeeding practices. If the organization is not a BFH, state or national requirements for the BFH qualification are reviewed.

**Diagnosis.** Intrapersonal and interpersonal levels: food- and nutrition-related knowledge deficit related to lack of prior exposure to accurate nutrition-related information or cultural beliefs as evidenced by reported knowledge, beliefs, and practices are determined.

**Institution and community levels:** low rates of breastfeeding (ie, limited adherence to nutrition-related recommendations) in the target community related to community’s food- and nutrition-related knowledge deficit, lack of role models or value for behavior change, cultural practices that affect the ability to learn/apply information, or lack of resources/access (such as lactation consultants, bicultural peer counselors,
access to a BFH) as suggested by community level survey data are documented.* For an institution, low rates of breastfeeding initiation (ie, undesirable food choices or limited adherence to nutrition-related recommendations) related to lack of resources (eg, infrastructure or staffing) preventing changes as evidenced by reports and observations of institutional practices and policies (eg, lack of BFH designation, low hospital-specific breastfeeding initiation rates, allowing marketing for baby formula to new mothers at the hospital, lack of lactation consultants or peer counselors) are identified.

Macro public policy level: state level or national policies that may be lacking adequate support for breastfeeding (despite the evidence from research) are identified.

**Intervention.** *Intrapersonal and interpersonal levels: as a part of the health care team, RDs/DTRs can provide culture- and literacy-appropriate nutrition education and counseling to address the knowledge deficit and other related barriers for pregnant women, nursing mothers and their families in wellness center, clinic, or hospital settings. Outcomes such as intentions to breastfeed, knowledge level, perceived barriers, or breastfeeding initiation are documented. Peer counselors can be a significant part of this team approach by enhancing the communication and delivery of the intervention. RDs/DTRs can refer women to peer counseling and other programs (eg, WIC, La Leche League) that support breastfeeding.*

*Community and organizational level problems often have multifactorial etiologies and this must be taken into account when stating diagnoses. Diagnoses and etiologies at these levels may require the use of slightly different terminology when there are no suitable terms in the current International Nutrition and Dietetics Terminology.

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Figure 2. A depiction of utilizing the social ecological model and the Nutrition Care Process for the breastfeeding example.
revising the institutional policies to promote breastfeeding. Outcomes such as the changes in personnel’s knowledge or practices, hospital- or community-wide breastfeeding rates, new or revised educational materials, number of referrals to breastfeeding programs, organizational policies or staffing structure are documented.

**Macro public policy level:** RDs/DTRs can take active roles in multidisciplinary networks to promote BFH and peer counseling at the regional and state level initiatives. They can also provide expert opinion for development or revision of state and national level policies and guidelines.

**Monitoring and Evaluation:** Intrapersonal and interpersonal levels: as a part of the health care team, RDs/DTRs can follow up on the breastfeeding status of the new mothers and their exposure to educational materials or sessions. Outcomes such as breastfeeding at the time of discharge from the hospital, during outpatient clinic visits, or through direct patient feedback are documented, and results are shared with the team and the organization.

**Institution and community levels:** RDs/DTRs can collaborate with the hospitals and community organizations to evaluate the program implementation (eg, nutrition education for general public or employees), to monitor the organizational policy and practice changes over time, breastfeeding statistics (eg, initiation, duration, and exclusivity rates at the community or institution levels) and to compare these results to the national estimates. Outcomes are shared with the overall community and relevant organizations and used to provide further input for the future interventions.

**Macro public policy level:** RDs/DTRs can take active roles in multidisciplinary teams to evaluate the implementation of regional initiatives and to monitor the changes over time in outcomes for regional, statewide, or national guidelines and policies. Comparison of outcomes with state or national standards and statistics, and sharing the information and expertise with relevant organizations, networks, and legislative bodies provide further input for future policy changes.

**HDPD STRATEGIES AND RECOMMENDATIONS FOR RDs AND DTRs**

**Intervention Components for Effective HPDP Strategies**

RDs and DTRs can play a critical role in HPDP and at the same time help reduce the health care costs through lifestyle modification (diet and physical activity). For example, the Diabetes Prevention Program (DPP) demonstrated that lifestyle modification can delay or prevent the development of type 2 diabetes, and RDs participated in the central management of the DPP in several capacities including development and delivery of the intervention. Lifestyle case management interventions delivered by RDs have been shown to help control weight and improve quality of life. There is growing evidence that such lifestyle interventions are cost-effective as well. The DPP and similar programs have been shown to be cost-effective especially when implemented as part of routine clinical practice. There is also evidence indicating cost-savings (ie, “more effective and less expensive” than the alternative) if such interventions are implemented at earlier adult years (<45 y).

Behavioral counseling, interactive educational sessions, skill and self-efficacy development (eg, cooking, self-management), and using communication tools are some of the characteristics of effective interventions to improve nutrition outcomes in HPDP. Motivational interviewing, goal-setting, self-monitoring, problem-solving, and structured meal plans or meal replacement techniques have also been reported as useful tools. Active participation (including community advocacy or community-based participatory research) and building support systems through peers and community health workers have also been reported as successful approaches. Policy and structural changes (eg, changing cafeteria menus, vending machines, provision of worksite physical activity opportunities, health insurance or gym membership benefits) are among the effective components in worksite wellness interventions. It must be noted that effective interventions usually employ several of these components rather than relying on one method to achieve success while dealing with complex issues such as obesity or chronic disease prevention.

Having culturally and linguistically tailored interventions is another characteristic that contributes to the effectiveness of HPDP projects. Language is a known barrier for receiving appropriate health-related services. Engaging culturally competent community health workers, peer counselors and interpretation services, and using culturally, linguistically and literacy-appropriate materials are helpful to overcome such barriers and to increase effectiveness of nutrition assessment and interventions.

Ultimately, increasing the number of RDs and DTRs from racial/ethnic minority populations or who are culturally competent and bilingual will most likely make strides in overcoming cultural barriers in HPDP. There are several cultural competency models that RDs and DTRs can use. Despite the variations, these models generally aim to improve communication skills and target eliciting the cultural characteristics related to nutrition and health behaviors. Although elements of cultural competence training or culturally competent health care practices can vary, a list of practices to enhance cultural competency at hospitals has been compiled and made available by the Joint Commission. In addition, RDs and DTRs can
benefit from the Academy of Nutrition and Dietetics’ resources and publications to enhance their cultural competency skills. Maintenance of changed behaviors is probably one of the most challenging aspects of HPDP interventions. Positive influences of interventions on lifestyle behaviors diminish over time, suggesting that continuing support is needed for individuals to maintain the healthy behaviors. Changes to the environment (e.g., social norms, access to healthy foods, limitations on competitive or less healthy foods) are necessary for lifestyle behaviors to be sustained. Through environmental changes, even the small changes in lifestyle behaviors can be long lasting.

**HPDP Strategies throughout the Life Cycle**

**Maternal and Infant Health.** The intrauterine environment is a major contributor to normal physiological growth. As stated in a position paper of the Academy, mother’s nutritional status prior to and during pregnancy and weight gain status during pregnancy affect infant’s birth weight and health outcomes. Disturbances at this critical time such as compromised nutritional status of underweight women or obesity can result in fetal growth restriction, low or high birth weight, preterm birth or gestational diabetes. Women with low SES are particularly vulnerable to dietary deficiencies during pregnancy. These conditions can lead to increased susceptibility to chronic diseases such as type 2 diabetes and CVD later in life for the mother or the baby.

HPDP efforts during this critical time can include nutrition counseling for optimal nutrition and weight status prior to and between pregnancies, management of acute and chronic health conditions, promoting breastfeeding, and encouraging participation in federal assistance programs (e.g., WIC, SNAP) that can extend the economic and nutrition education resources for pregnant or postpartum women and their families.

HPDP efforts should be directed to women of reproductive age as well as health professionals and institutions that provide services for them. Counseling for optimal nutrition should include but is not limited to:

- an individualized, healthy diet based on age, physical activity level, weight, pregnancy and health status that is consistent with the Dietary Guidelines for Americans should be implemented prior to, during and between pregnancies;
- prevention of excessive weight gain based on the most recent Institute of Medicine guidelines;
- appropriate level of physical activity consistent with the national guidelines;
- appropriate use of vitamin and mineral supplements, particularly iron, calcium, and vitamin D if not met through dietary sources first;
- discouragement of caffeine, alcohol, and smoking;
- awareness of cultural practices that may affect diet intake;
- food safety; and
- managing health conditions such as diabetes and hypertension before, during and after pregnancy.

As outlined in an Academy position paper in 2009, RDs/DTRs should take active roles in supporting exclusive breastfeeding for the first 6 months of life and breastfeeding with complementary foods from 6 months to at least 12 months of age because of the health benefits it confers, including psychosocial, economic, and environmental benefits.

Because research has shown that returning to work is associated with early discontinuation of breastfeeding, a supportive work environment may make a difference in whether mothers are able to continue breastfeeding.

Despite overall improvements in breastfeeding rates, unacceptable disparities in breastfeeding persist by race/ethnicity, socioeconomic characteristics, and geography. For example, breastfeeding rates for black infants are about 50% lower than those for white infants at birth, age 6 months and age 12 months even when controlling for family income or education level.

In contrast, some immigrants may be supportive of breastfeeding as a part of their primary culture, but they may lose this healthy behavior as they spend more years in the United States and acculturate towards mainstream American lifestyle. Identifying these groups and providing more focused and culturally appropriate counseling is necessary to help retain or promote the healthier behaviors as well as to help prevent the adoption of unhealthy behavior patterns. Coordinating these efforts with peer counselors or peer support groups can be cost-effective approaches “especially where professional breastfeeding support is not widely available.”

**Strategies for RDs and DTRs:**

- Counsel clients about the benefits of breastfeeding, clean and safe breastfeeding practices, and appropriate weaning foods.
• Work with employers to establish policies and maintain comprehensive, high-quality lactation support programs for their employees.

• Work to overcome barriers to breastfeeding through solutions such as: private workplace locations for breastfeeding, breast pump rentals, lactation consultants, peer counselors, community support groups or other resources and child-care providers to accommodate the needs of mothers to have direct access to their babies or to provide adequate storage for breast milk.

• Work with underserved communities to help eliminate disparities in breastfeeding.

• Use educational strategies based on informed decisions and including the support of family and peers.

• Discourage the use of educational materials supplied by formula companies or formula marketing to pregnant women.

• Be “familiar and comply with the International Code of Marketing of Breastmilk Substitutes” and keep a current knowledge of related policies and research.

Early and Middle Childhood. Children need to be exposed to a variety of healthy foods so they can learn to make successful choices independently. To this end, parents and other caregivers need to be educated on healthy food choices and appropriate feeding practices for physical and emotional development. Because children can spend a substantial part of the day at child-care facilities and schools, educators and administrators at these institutions are also key figures in supporting nutrition education and a healthy food environment as well as opportunities for physical activities. Effective communication of nutrition information in each of these settings should be culturally sensitive, age-appropriate, and interactive when possible.

While increasing the exposure to healthy food options at home, school, or child-care settings, exposure to less than optimal food choices should be limited to help support a food environment that is conducive to healthier eating patterns. Therefore, media literacy among parents, caregivers, educators, as well as policies to limit children’s media exposure for less than optimal food choices and lifestyles should be encouraged.

Strategies for RDs and DTRs:
• Support and promote the Dietary Guidelines for children and the use of the US Department of Agriculture’s MyPlate as a guide for meeting dietary recommendations.

• Support and promote healthy, culturally diverse dietary intake patterns. Help immigrant families retain their healthier food intake patterns that they might have as a part of their primary cultural heritage, and prevent the adoption of new and less optimal eating patterns as they acculturate.

• Provide nutrition education for parents, caregivers, and child-care and education professionals on how to model and encourage healthy eating practices (in home, child-care, and school environments), regular family mealtimes, and media literacy.

• Provide expertise to food and marketing companies, media outlets, and other organizations or legislative bodies that determine public policies to help support a healthy eating and physical activity environment for children.

Adolescence. Adolescent and teen years are years of rapid growth. Considering the high rates of overweight/obesity as well as disordered eating patterns, this is a critical phase to help teens establish and maintain healthy eating behaviors and a physically active lifestyle. Parents need guidance on the appropriate foods for proper growth, and this is also the best time to help teens learn how to make healthier nutrition decisions for themselves when eating at home, in school or outside the home. Most importantly, making the healthier choices the easy choices in every environment is critical. Adolescents and teens spend 7.4 hours a day, seven days a week using media. Adolescents and teens whose parents make an effort to limit media use—through the media environment they create in the home and the rules they set—spend less time with media than their peers.

Strategies for RDs and DTRs:
• Provide parents with resources and skills for making nutrient-dense foods readily available at home for the entire family.

• Train parents and teens in simple cooking skills.

• Teach families with low SES about economical ways to obtain and prepare healthier foods.

• Educate parents and teens about how to use the Nutrition Facts panel and other food label information so they can select healthier food options.

• Educate parents and teens about media literacy and healthy body image to help against potentially negative media and peer influences on eating patterns and body image.

• Support parents to encourage teenagers in choosing an activity they enjoy and to be physically active for at least
30 to 60 minutes most days of the week.

- Provide support and education for teens, parents, caregivers and educators related to the use of media.

- Encourage parents to model good behavior for the entire family — eating healthy and exhibiting a healthy attitude toward eating, food and physical activity.

- Encourage parents to take an active role in their school’s wellness council.

**Adulthood.** An essential component to keeping all adults healthy is preventing chronic diseases and reducing associated complications among those who are already diagnosed. As primary prevention strategies, optimal nutrition and an active lifestyle help promote and maintain health throughout the adult years. Maintaining weight, optimal nutrition, appropriate physical activity, and avoiding other lifestyle-related risk factors (eg, cigarette smoking or certain alcohol intake patterns) can delay or prevent chronic diseases such as type 2 diabetes and CVD. Nutrition plays a vital role in the aging process and can be critical in preserving health, maintaining function, and reducing health care costs—especially for older adults.

**Strategies for RDs and DTRs:**

- Support and promote the Dietary Guidelines for adults.
  
  - Provide recommendations for consumption of nutrient-dense foods and beverages including fruits, vegetables, whole grains, low-fat dairy, lean meats, poultry, fish, beans, eggs, and nuts and seeds.

  - Provide recommendations to limit the intake of sodium, solid fats, added sugars and refined grains that can contribute to disease risk.

  - Encourage an active lifestyle: at least 150 minutes of moderate intensity aerobic activity (eg, brisk walking) every week and muscle strengthening activities on two or more days of the week that work all major muscle groups (legs, hips, back, abdomen, chest, shoulders and arms).

  - Encourage intake of vitamins and minerals at Dietary Reference Intake levels primarily from dietary sources to support health and promote disease prevention.

- Support and promote the use of the US Department of Agriculture’s MyPlate as a guide for meeting dietary recommendations.

**Institutional, Community, and Public Policy Level HPDP Strategies for RDs and DTRs**

**Institutional.**

- Accelerate the translation of scientific findings into community, worksite, and school practices and policies to protect the health of people where they live and work.

- Provide guidance and expertise to child-care facilities and schools to help implement the Dietary Guidelines for Americans through nutrition education, school meals, and school programs and policies.
  
  - Provide training for school foodservice staff on policies and guidelines related to school meals.

- Support the availability of healthier food and beverage options in schools through farm-to-school and related initiatives.

- Provide guidance to school wellness councils to develop and implement healthy eating and physical activity policies, to monitor progress and to ensure program sustainability that will support a healthy school environment.

- Take active roles in developing and implementing organizational nutrition and wellness policies in places such as worksites, hospitals, senior centers, living facilities for older adults and corporate or faith-based organizations.

- Take active roles in working with industry (eg, food manufacturers, retail stores, marketing companies, media) to provide nutrition education and information, such as labeling requirements, to promote consumer health and wellness communication.

- Encourage policies for healthier menu options in restaurants, schools and worksite cafeterias.

- Take active roles in food industry, culinary and other related (eg, food marketing) organizations through advisory boards, panels and provision of nutrition education and guidance to improve institutional awareness, policies and practices – including food production, distribution and marketing – to support a healthy lifestyle.

- Collaborate and build partnerships across child-care-, health-, and education-related disciplines and professional organizations to create and actively participate in multi-disciplinary initiatives (eg, the State Department of Health, Maternal and Child Health, Department of Education, WIC, and Head Start).
Community.

- Develop and implement culturally and literacy-appropriate nutrition education programs and materials that can be used in a variety of community settings (eg, through community agencies, faith-based organizations) to promote health and reduce the risk of chronic disease.

- Collaborate with other health professionals to expand prevention (eg, healthy eating, staying physically active, immunizations) and early detection services especially for older individuals, racial/ethnic minorities, and those with low SES.
  - Partner with state and local agencies to provide health promotion programs for adults related to common diseases such as cancer, CVD, type 2 diabetes, hypertension and osteoporosis.

- Collaborate across other disciplines (eg, agriculture, economics, urban planning, public health, social work and medicine) to help address the health disparities that are often experienced by racial/ethnic minorities and individuals with low SES. Such collaborations should create a more diverse body of partnership to better understand and engage the target communities and also to help form a workforce with greater capacity to properly address the systemic issues at hand.

- Collaborate and support health promotion efforts targeting social and environmental determinants of health, such as increasing access to affordable healthy food options in food deserts or other underserved communities. Initiatives such as community gardens, school gardens, farm-to-table (or farm-to-institution), farmers’ markets, or corner store programs can be especially useful for point-of-purchase interventions at the institution or community levels. Such efforts can help change the environment especially for racial/ethnic minorities and individuals with low SES who are likely to experience greater limitations in accessing healthier foods.

- Collaborate with community members, and local and state agencies for monitoring nutrition- and health-related issues and outcomes in the community health surveillance efforts.

Macro public policy.

- Policy, social, and environmental changes have a great potential for improving the health of all segments of the population. RDs and DTRs need to advocate for evidence-based food and nutrition policies and take leadership roles to facilitate the environmental changes that support an active lifestyle.

- Advocate for public policies and funding for nutrition, prevention and disease management programs at the local, state and national levels.
  - Be active members of public policy teams who participate in policy development to assist in moving health promotion policies forward.

- To guide the HPDP efforts, utilize the national research-based policies and recommendations such as the Dietary Guidelines for Americans, Healthy People 2020, and National Prevention Strategy (see Figure 3). The National Prevention Strategy which focuses on health disparities and a comprehensive health promotion and disease prevention framework throughout all stages of life is a critical component of the Affordable Care Act. In addition, these guidelines should be used by RDs and DTRs in advocating for policies such as the Farm Bill, WIC, SNAP or school meal guidelines to promote health and reduce chronic disease.

- “Advocate for policies that position breastfeeding as the norm for infant feeding.”

- Provide expertise and guidance to food and marketing industries, and media outlets to help support a healthy eating and physical activity environment within the overall food system including healthier food production, distribution, and marketing policies and practices.

- Assess, evaluate, and monitor intervention outcomes to identify and document potential solutions and nutrition, health and economic impacts to inform the development of future policies.

**RECOMMENDATIONS FOR FUTURE PRACTICE**

- RDs and DTRs need to anticipate, adapt, and respond to the changing needs of society. Two prevalent characteristics of today’s society in the United States are the aging population and a population that is very diverse. RDs and DTRs need to be proficient in methods to support optimal health for an aging population. RDs and DTRs must also engage in planning and advocacy for equal access to healthy food, nutrition education and quality health care thereby reducing social inequalities and health disparities.

- RDs and DTRs are well-trained in the science of food and nutrition. Cultural competencies must also be a part of their daily practice emphasizing quality and equity to ensure adequate access to nutrition education and care for a diverse population.
• RDs and DTRs need to apply scientific approaches to social marketing, health education, and consumer research to inform and influence individual, organizational, community, and public policy decisions on health.
  
  o Be familiar with the social determinants of health, health equity, and life course theories and the social ecological models and use these multifactorial approaches to promote health.
  
  o Utilize the NCP and the Evidence Analysis Library to support evidence-based practices.

• RDs and DTRs are integral leaders/members of interdisciplinary teams in education, research and practice as well as health reform. Collaborating with interdisciplinary teams is critical for RDs and DTRs to promote health and prevent chronic diseases by using the NCP and the social ecological framework.

• RDs and DTRs, as members of the health care team, should translate and integrate findings from research into their various practice settings that can demonstrate and improve the cost-effectiveness of lifestyle interventions.

• RDs and DTRs should be in the forefront of conducting HPDP research and stay abreast of current and emerging scientific developments (eg,
nutrigenomics, nutrigenetics) to be able to lead the future directions.

- The Academy’s Report on Future Practice Recommendations encourages RDs and DTRs to advance their skills and increase their professional development.
  - RDs and DTRs should develop competency in the role that technology and social media can play in health promotion and behavior change.
  - RDs and DTRs should maintain active and leading roles in developing and implementing culture- and literacy-appropriate nutrition education materials and programs to invest in the next generation of RDs and DTRs to develop critical thinking, communication, and cultural competency skills as well as advancing HPDP knowledge base, skills, and strategies for the future RDs, DTRs, and other practitioners.

CONCLUSIONS

Although individual level determinants of health and disease are important and have, traditionally, been the most common way that RDs and DTRs practiced health promotion and disease prevention in the past, it is now widely recognized that physical and social environment influences individuals’ behaviors, and for individuals to successfully change their behaviors, environment must be conducive to that change. Therefore, complex health issues such as obesity or chronic diseases often require system-wide, multifactorial, and multidisciplinary solutions. Chronic disease prevention, to be most effective, must occur in multiple influence layers within the social ecological context and across individuals’ entire life spans. Further, HPDP should focus on addressing the needs of those who are more likely to experience health disparities and are at increased risk for chronic diseases such as racial/ethnic minorities and individuals with lower SES.

As the nutrition experts, RDs and DTRs must be active members of multidisciplinary teams and leaders in promoting optimal nutrition. The social ecological model and NCP provide RDs and DTRs with a framework to apply HPDP practices. Practice examples, effective program components and a comprehensive range of HPDP strategies have been included in this paper. In every HPDP effort, employing cultural competency models will ensure that RDs and DTRs better serve the needs of the diverse US population and more effectively reach the population subgroups such as minorities and immigrants who experience health disparities. Using evidence-based programs and an environmental approach, RDs and DTRs can assist individuals, organizations and communities to make the long lasting changes to promote health.

Acknowledgements

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We thank the reviewers for their many constructive comments and suggestions. The reviewers were not asked to endorse this practice paper.
References


