When given the task of creating this issue of *On The Cutting Edge (OTCE)*, our theme team was presented with the challenging topic of “public health and diabetes.” The challenge involved the numerous topics we generated in brainstorming potential articles. We could publish multiple OTCE issues just on public health subjects! By focusing on the public health system, we identified topics representing several of the various sectors, including public and private organizations as well as local, state, and federal governments.

Public health means more than government involvement in health issues. Public health is a system of multiple entities working together to improve and protect the health of our communities (Figure).

**Figure.** The public health system. Available at http://www.cdc.gov/nphpsp/essentialservices.html. Accessed September 2013

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**Message from the Theme Editor:** Sandra A. Parker, RD, CDE
Consultant
Walker, Michigan
With many years of experience working for state diabetes prevention and control programs, our theme team chose topic areas that we perceived to be innovative, current, and relevant for Diabetes Care and Education (DCE) members. Each of the authors in this issue is an expert who is well-versed in his or her subject matter areas.

Kristine L. Godbold, RD, CDE, introduces us to a diabetes self-management education program (DSME) that is being offered nationwide in community settings through the Area Agencies on Aging. This effort is unique in two respects: 1) It is a nontraditional setting for DSME, and 2) The program combines traditional DSME with a 6-week self-management support workshop series.

Ann Constance, MA, RD, CDE, FAADE, reviews the virtual community offerings that have filled the void where access to accurate information and education can be difficult. The number and type of online resources available for people living with diabetes are significant and continuously expanding.

Another nationwide trend is the growing number of supermarket dietitians providing nutrition education in communities. Janine Faber, MEd, RD, LD, discusses the variety of ways that supermarket dietitians provide diabetes education and raise consumer awareness as well as suggestions for cooperation between these dietitians and their counterparts in the clinical arena.

Disparity is an important public health issue and an area of focus for our profession. Robin B. Nwankwo, MPH, RD, CDE, and Steven P. Ren, BS, have summarized this problem as it relates to people living with diabetes.

Food insecurity exists in every community, and Kim Prendergast, RD, MPP, discusses this situation related to diabetes. She provides valuable strategies and approaches to enable clinicians and organizations to address and support patient needs more effectively.

Joan V. Czarnowski-Hill, RD, CDE, LDN, comments on advocacy and health policy at all levels. As both health care professionals and...
community members, we are called to action to stay informed and be involved.

Numerous DCE member volunteers gave of their time to write, review, and provide valuable comments in bringing this issue to completion. Many thanks to our theme team members for the inspiration they provided and to OTCE editors for their greatly appreciated guidance to a first-time theme editor.

“It takes a village to raise a child” is an African proverb that illustrates the belief that raising a child is a communal effort. The public health system offers a similar communal effort to help people with diabetes and other chronic diseases. In addition, many hours of work by many volunteers has made this publication happen for our DCE village. We hope that what you learn from reading this issue will have application in your local diabetes village.

**Sorry we missed it!**

In the Summer 2013 issue of OTCE, the following recognition was inadvertently missed by the OTCE Editor.

Riva Greenberg, CHC, DPE, co-authored the article entitled “A Flourishing Approach to Mental Health in Patients with Diabetes”. Riva is an author, speaker, certified health coach and Huffington Post columnist. She has authored the following books: Diabetes Do’s & How-To’s; 50 Diabetes Myths That Can Ruin Your Life; The ABCs of Loving Yourself With Diabetes.
Abstract

The paradigm of how and where diabetes self-management education and support (DSMES) programs are offered continues to shift, with greater movement toward community-based settings, especially for older adults. Area Agencies on Aging (AAAs) serve their communities as an outlet for services related to older adults and promote opportunities for collaboration among providers to deliver services. AAAs fill a unique void in the arena of diabetes education by offering DSMES programs in community settings where older adults feel comfortable and are more apt to attend. Community partnerships formed between AAAs and health care providers can lead to improved access to DSMES programs.

Introduction

In an effort to provide older adults with the support needed to manage their diabetes, the Administration on Aging (AoA) implemented a pilot program several years ago to assist AAAs in establishing DSMES programs. The “Diabetes Self-Management Training (DSMT) Reimbursement Initiative” was an attempt to generate financial sustainability by achieving accreditation with either the American Diabetes Association (ADA) or the American Association of Diabetes Educators (AADE), which would enable AAAs to bill for diabetes education under Medicare guidelines (1). Revenue generated from billing could be used to keep the programs operating and growing in lieu of federal grant funding that has virtually disappeared in the current economy. A business model was developed for the DSMT Initiative that employs the Stanford University Diabetes Self-Management Program (DSMP) as a curriculum, which includes all standards of diabetes education and skills training necessary for people with diabetes to manage their condition. The program must be facilitated so as to maintain fidelity to the Stanford Program while adding the elements necessary to meet rigorous accreditation standards (Table 1). Program enhancements include having an advisory council, using a primary qualified instructor (PQI), managing medical records, and having a continuous quality improvement process in place (2). Participants attend a 6-week workshop that is held once a week for 2.5 hours. In addition, they spend time with the PQI to complete an assessment and receive an education plan that includes individualized goal setting. Follow-up appointments are also needed to measure progress and success of meeting those goals.

The Aging Network

A total of 629 AAAs cover every county in the United States. They partner with more than 20,000 local service provider organizations nationwide. This National Aging Network, an interconnected structure of agencies and services, serves as a trusted resource for millions of older adults (3). Their goals are to help seniors stay healthy and independent for as long as possible and to stay in their own homes and be vital parts of the communities in which they live. The AAA’s partnerships include: faith-based organizations, senior centers, congregate meal sites, recreational centers, and local health departments. Evidence-based programs, including the Stanford
Chronic Disease Self-Management Program and Stanford DSMP have been conducted with partner agencies for the past several years, with the cost of implementation covered by federal grants. The last large grant funding came from the American Recovery and Reinvestment Act in 2009 (4). Because no further grant funding is available, AAAs must find an alternative revenue source, which prompted consideration of reimbursement pathways from Medicare and/or third party payers.

Diabetes Self-Management in Community-based Settings

Many of the nation’s leading health care experts recommend a combination of clinical and community-based interventions to address the growing prevalence of chronic conditions. Community-based self-management programs are important in helping older adults manage their chronic conditions. Diabetes is among the most prevalent of chronic illnesses that affect older people. Thus, having the AAAs offer DSMES programs to seniors in their service areas seems to be a natural fit (3). They can play an important role in expanding the use of Medicare’s DSMT benefit, especially among underserved seniors who may not have access to other DSMES programs (5).

Registered dietitians (RDs) and registered dietitian nutritionists (RDNs) can assist AAAs in providing DSMES programs; many AAAs already employ RDs or RDNs in their nutrition programs. The Task Force on Community Preventive Services, after completing a systematic review of population-oriented strategies to improve the care of people with diabetes, concluded that sufficient evidence indicates that participation in DSMES programs results in improved glycemic control (6). Therefore, they recommend that such programs be offered in community gathering places for adults with type 2 diabetes.

How AAAs Can Establish DSMES Programs

AAAs are not generally recognized as Medicare providers and cannot bill for services to receive Medicare reimbursement. For this reason, they must have a health care partner who is already an established provider for Medicare services. The partner can be a physician, a Federally Qualified Health Center, hospital, clinic, or other qualified entity with a valid Medicare billing number (5). A few AAAs are seeking provider status to bill Medicare as independent entities.

One of the goals of the AOA’s DSMT initiative was to assist AAAs and their partners in developing a program using Stanford’s DSMP model that would meet the accreditation requirements from ADA or AADE, which could result in recognition by Centers for Medicare & Medicaid Services (CMS) as a Medicare provider (1). As noted previously, many AAAs have established relationships with health care providers, including those who can bill Medicare for DSMT services. Through these partnerships, AAAs can receive participant referrals from the health care partner, conduct the DSMT sessions, operate or collaborate to provide the infrastructure necessary to support an accredited program, and work with the health care partner to maintain medical records needed to bill Medicare for payment. AAAs can also enroll participants and market DSMT in community-based settings where they offer other services (5).

Business Plan, Budgets, and Billing Partners

Developing a business plan for a DSMT program requires a clear understanding of anticipated expenses and revenue potential. Expenses include, but are not limited to, staff salaries, use of facilities, transportation, instructor training, materials, consultants, and marketing. To enable a comprehensive analysis, the business plan must include detailed information on the duties and responsibilities of the partnership and its members.

Because DSMT has a fixed reimbursement level that is mandated by CMS, total revenues are determined by the number of participants and reimbursement rate, and rates vary by geographic location. Controlling program expenses can aid the program in generating sufficient revenue for sustainability.

A final planning step is to project and determine the minimum number of participants who must enroll in the program to meet costs and turn a profit. Of note, an increase in the number of participants causes some costs to increase while others remain fixed. To generate more revenue, the programs that have an RD or RDN available can offer participants medical nutrition therapy in addition to DSMT (Table 2).

The billing partner must be willing to submit claims for reimbursement to the Medicare fiscal intermediary. One claim is submitted for every service provided to the qualified Medicare beneficiary. The payment is sent to the Medicare provider partner. A binding agreement between the AAA and its billing partner that states the amount of the reimbursement rate to the AAA.
must be in place and understood by both parties before submission of claims for services. A memorandum of understanding or a formal contract should be executed to ensure compliance from both sides (5).

The Role of the AAAs

The AAAs can provide the infrastructure and resources to offer DSMES programs to older adults. Diabetes has been called “one of Medicare’s most significant challenges.” A 2010 study conducted by CMS showed that 28% of beneficiaries had a diagnosis of diabetes (7). Most of those beneficiaries either do not know about the DSMT benefit, know about it and are not using it, or do not have access to a program. Although the benefit has been available for more than a decade, recent information shows that DSMT continues to be underutilized by the eligible population of Medicare beneficiaries (8). The morbidity associated with poorly managed diabetes and the growing evidence supporting the effectiveness of DSMT services underlines the importance of improving Medicare beneficiary access to these services (9).

AAAs represent a recognized conduit of support services for seniors. In collaboration with ADA, AADE, Stanford University’s Patient Education Research Center, and the National Council on Aging, AoA created a toolkit to assist AAs with establishing a DSMES program that is accredited, recognized by CMS, and capable of generating a funding source from reimbursement income (5). Although AoA’s DSMT Reimbursement Initiative has ended, and they no longer are accepting requests from individual AAAs to provide technical assistance, AoA continues to support the effort by offering the DSMT Toolkit on their website, www.aoa.gov. Increased access to DSMT programs can allow more seniors to learn important diabetes self-management skills that, in turn, can lead to significant reductions in the use and costs of health care.

Conclusion

Government agencies at both the federal and state levels are looking for ways to improve access to health care and placing a strong emphasis on self-management education. For example, in Minnesota, the report from the Community and Family Health Division, “Creating Healthy Communities for an Aging Population,” recommended a framework for healthy aging (10). To optimize health and well-being, the report recommends support of infrastructures that provide education and tools for health promotion and assist in individual responsibility for disease self-management. Numerous other states have similar initiatives that emphasize the benefit of strong community involvement in health-related issues.

Community-based diabetes programs led by AAAs should not be viewed as competition to traditional hospital- or clinic-based programs; rather, they can serve as additional referral sources, especially for older adults who may be resistant to visiting health care facilities. Providing the opportunity to learn diabetes self-management skills in a familiar environment may enhance the older adult’s ability to learn. The older adult may be more likely to engage in the process when attending diabetes programs in their own churches, the senior center where they have lunch, or the recreational facility where they attend exercise classes.

References


<table>
<thead>
<tr>
<th>Program</th>
<th>Code</th>
<th>Reimbursement</th>
<th>Quantity</th>
<th>Total</th>
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<tr>
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<td>G0108</td>
<td>$52.06</td>
<td>Each 30 minutes x 2 units (1 hour)</td>
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<td>DSMT (Group)</td>
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<td>13.95</td>
<td>Each 30 minutes x 18 units (9 hours)</td>
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<td>80% = $200.88</td>
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<tr>
<td>MNT (Individual)</td>
<td>97802</td>
<td>35.38</td>
<td>Each 15 minutes x 4 units (1 hour)</td>
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<td>100% = $141.52</td>
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<tr>
<td>MNT (Group)</td>
<td>97804</td>
<td>15.65</td>
<td>Each 30 minutes x 4 units (2 hours)</td>
<td>$62.60</td>
<td>100% = $62.60</td>
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<tr>
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<td></td>
<td></td>
<td>$6,712.08</td>
<td>$5,859.60</td>
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</tbody>
</table>

DSMT = diabetes self-management training; MNT = medical nutrition therapy

Rates can vary with geographic area. Federally Qualified Health Centers cannot bill for group education and the reimbursement for individual rate is usually higher. These amounts are based on first year of the beneficiary using the DSMT benefit.
Introduction
The need to integrate programs in the public health arena with those in more traditional models of medical care is increasingly recognized as crucial, given the growing numbers of people living with diabetes and other lifelong health conditions. In addition, ongoing changes in health care contribute to this need for a closer link between public health initiatives and clinical-based services (1,2). Table 1 compares the 10 essential public health services with the chronic care model, emphasizing how they support one another. The focus of this article is to help registered dietitians (RDs) and registered dietitian nutritionists (RDNs) connect people with diabetes to community resources for additional support or education. More specifically, it addresses how technology expands the number and type of community resources available for those who have diabetes.

Those in clinical practice who might refer the person with diabetes to in-person or technology-based services outside of the medical system may be concerned about the quality of such services or information. How can RDs and RDNs really know which web-based and smartphone resources would be useful? Which programs and tools have a solid base in science? In addition, what programs have been evaluated and shown to improve health behaviors?

Other factors to consider about resources include health literacy level, target audience, and cost.

Online Diabetes Self-management Support Programs
Ongoing support for behavior change is critical for most with diabetes, and some web-based programs have been shown to enhance the adoption of healthful lifestyles. One program that is supported by substantial evidence is the Better Choices Better Health Diabetes (BCBH-D) program. This worldwide evidence-based community program was developed through Stanford University. Evaluation of BCBH-D indicated that individuals in the intervention group became more engaged in their care, improved their confidence level for self-care, and lowered their glycate hemoglobin values more than control participants (3). As with other community-based programs, BCBH-D is not designed to replace recommended medical services; rather, it helps to enhance self-care behaviors through goal-setting, group support, and modeling of behaviors by facilitators and peers. BCBH-D is currently available for no charge through the National Council on Aging at www.restartliving.org. However, fees may be attached to the program in the future. In addition, an online chronic disease program available on the same website, Better
Choices Better Health, may be useful for those at risk for developing diabetes and who already have another chronic health condition.

Increasing numbers of overweight people have or are at risk for diabetes. This situation highlights the immediate need for effective, low-cost approaches to weight management that can reach large numbers of people. Internet or mobile-based weight control programs may be an appropriate means. Current research on technology-driven weight loss programs is promising. A recent review of interactive computer-based weight loss programs indicated that weight loss in the groups using the programs was better than minimal intervention (4). However, many of the studies were of short duration.

One potentially useful online program for weight management and diabetes prevention is the Virtual Lifestyle Management Service (VLM). It is based on the National Institutes of Health Diabetes Prevention Program (DPP), which has been credited with a 58% reduction in the risk of developing diabetes for people at high-risk through implementation of lifestyle changes. Ten years after the DPP study ended, the lifestyle group continued to have a 34% lower incidence of diabetes development than the control and metformin groups (5).

In a yearlong VLM study at the University of Pittsburgh, 45 out of 50 patients completed the program (6). The overall average weight loss for those who finished the program was 4.79 kg (10.5 lb). Nearly 50% lost 5% to 7% of their body weight and kept it off for 12 months. Patients also lowered systolic blood pressure by 7.33 mm Hg, consumed less dietary fat, and became more active. The program consisted of 16 weekly sessions, followed by monthly lessons for 8 months. Coaches sent participants personalized, secure

Table 1. Comparison of the 10 Essential Public Health Services (EPHS) With the Chronic Care Model (CCM)

<table>
<thead>
<tr>
<th>10 EPHS*</th>
<th>Related Elements of the CCM</th>
</tr>
</thead>
<tbody>
<tr>
<td>The 10 EPHS focus on populations as a whole</td>
<td>The CCM focuses on individuals within the population treated by a medical practice that distinguishes acute from chronic care in a planned manner evident of delivery system design and that is part of a health care organization comprised of providers, purchasers, and payers</td>
</tr>
<tr>
<td>1. Monitoring health status (1) and diagnosing and investigating problems (2)</td>
<td>1. Clinical information systems to identify an individual’s health problems</td>
</tr>
<tr>
<td>2. Inform, educate and empower people (3) and assure a competent workforce (8)</td>
<td>2. Informed, activated patient receiving self-management support and interacting with a prepared, proactive practice team</td>
</tr>
<tr>
<td>3. Policies/plans that support health efforts (5) and laws/regulations that protect patients (6)</td>
<td>3. Decision support with evidence-based clinical practice guidelines used by providers and supported by community policies</td>
</tr>
<tr>
<td>4. Mobilization of community partnerships (4) and linking of people to needed services (7)</td>
<td>4. Community resources linked among business, health care, and government</td>
</tr>
<tr>
<td>5. Evaluation of current systems (9) and research for innovative solutions (10)</td>
<td>5. Rapid change quality improvement cycles: plan, do, study, act (PDSA), to evaluate the effectiveness of system redesign within the health care organization and assurance that decision support remains current</td>
</tr>
</tbody>
</table>

*The 5 categories proposed here are logical groupings of the 10 EPHS that correspond to the elements of the CCM. Although the 10 EPHS might resonate well with public health stakeholders, elements of the CCM might resonate better with clinical partners. Both the 10 EPHS and CCM provide frameworks for community assessments and rallying of partners around collaborative interventions. Developed by Robin Edelman and used with her permission.
messages. In addition, they hosted chat sessions and offered an optional live group orientation. Patients were encouraged through email prompts to plan time for physical activity and track their behavior. They also received weekly individualized progress reports.

Another resource that provides links to resources and other programs is the National Diabetes Education Program (NDEP). Jointly overseen by the National Institutes of Health and the Centers for Disease Control and Prevention, NDEP encompasses a partnership of more than 200 local, state, and national organizations. One of the portals on the NDEP website is Diabetes HealthSense (www.ndep.nih.gov/resources/diabetes-healthsense/), which provides access to a variety of tools and programs that can help people with or at risk for diabetes live well and achieve their health goals. Examples of the tools or programs available on HealthSense include a link to an interactive menu planner from the National Heart, Lung and Blood Institute and “Go Meals,” a smart phone or tablet application designed to provide instant access to diabetes nutrition facts. More details about web- or phone-based versions of VLM are also on the Diabetes HealthSense site.

Many other technology-based supports exist for those who have diabetes. A variety of patient-centered communities are available online, and people and organizations are connecting via social media. In addition, smartphone apps that support eating better and being more active have proliferated. Text-based programs can help those who have diabetes initiate and sustain lifestyle changes. Many of these technology-based community resources lack a strong base of evidence, so it is uncertain whether these resources support positive health behavior changes.

Online Diabetes Resources

Many people who have diabetes use technology to enhance their knowledge of treating and managing their condition. However, the seemingly infinite number of sites can be filled with misinformation. Beyond the accuracy issue, clinicians also are concerned that people may self-treat with unproven or potentially dangerous alternative therapies, thereby delaying care that has been shown to help control diabetes and lower the risk of complications. A few sites that offer helpful information include DIABETES LOCAL, dLife, NDEP, DCE, and the American Diabetes Association (ADA).

DIABETESLOCAL (www.diabeteslocal.org) is a listing of resources that support self-management behaviors for living a healthy life. After registering on the website, users can add and edit resources, set the desired region for searching, and browse any of the eight different categories (e.g., healthy eating, education, and monitoring) for programs. This site can be used to chronicle local resources as well as access national resources that may not be found in a local registry. For example, this author’s region includes an extensive list of online regional resources that is maintained and updated by a local nonprofit organization. These diabetes resources are supported by a broader range of social and medical resources through our local 211 number. The DIABETESLOCAL site also provides links to national web-based resources such as www.learningaboutdiabetes.org, a site that specializes in low literacy materials.

The website dLife (www.dlife.com) was established to offer practical advice on living with diabetes 24/7. The site offers information on diabetes and exercise, weight control, and menu planning, all written or reviewed by health care professionals. People are also given the opportunity to connect in online communities, blog their experiences, and respond to questions that others have posted, although some of the information may not be evidence-based. For several years, dLife also has had a television arm, but viewing is now only available online.

Educational handouts are often used to expand and complement face-to-face educational programs. Some exceptional websites contain information and teaching tools for use by both patients and diabetes educators/RDs/RDNs. The NDEP handouts (www.ndep.nih.gov) are particularly useful because many have been evaluated for literacy levels and pilot-tested. Tools have been developed for those who have or are at risk for developing diabetes. In addition, ethnically appropriate materials in a variety of languages are available. RDs, RDNs, other health care professionals, and community organizations can find resources to help them better address diabetes care and support issues in their practice settings.

DCE (www.dce.org) and the ADA (www.diabetes.org) are two additional organizations known for offering accurate diabetes information. Both online sources provide a variety of recipes with nutrition facts. DCE has up-to-date patient education handouts on a variety of nutrition and diabetes
medication topics. ADA has numerous articles on diabetes topics that are written for the consumer. Most consumer articles on the ADA site also offer the option to listen to the articles instead of reading them – a great option for individuals with visual impairments!

Conclusion
Diabetes can be a difficult condition to manage. By identifying and using community resources, the RD/RDN/diabetes educator can be instrumental in providing much-needed support to the affected people.

Currently, an estimated 8.3% of Americans live with diabetes, and 35% of adults older than 20 years of age have pre-diabetes (7). Among those older than age 65, the numbers rise dramatically to 26.9% living with diabetes and 50% having pre-diabetes (7). The burden of diabetes in the United States is expected to rise to 1 out of 3 adults by 2050 (8). In 2009, an estimated 74% of Americans had access to the Internet (9).

Additionally, a recent report from the Pew Research Institute showed that more than half of those older than age 65 use online technology (10). Linking those who have or are at risk for diabetes to technology-based resources is an important part of their ongoing care and support today that is expected to increase in the years ahead.

References
Abstract
The number of supermarket dietitians is expanding as grocers recognize the benefits of employing registered dietitians (RDs) or registered dietitian nutritionists (RDNs) to help their customers in the store and/or in the community. The program offerings and roles and responsibilities of these dietitians may differ considerably within and between stores in the same city, state, or region. Duties may include providing educational materials, online resources, media services, and in-store programs; partnering with pharmacy; and participating in community events and programs. Hospital, clinic, and community-based RDs and RDNs may share resources and develop joint programs with their counterparts in local grocery stores.

Introduction
The responsibilities and number of supermarket dietitians continue to expand as grocers recognize the benefits of employing these professionals either as staff on-site or in the community to provide nutrition guidance to customers. Although each supermarket dietitian may have different roles and responsibilities, their overarching goal is to offer accurate nutrition advice and meal solutions. The expertise provided by an RD or RDN is a “value-added” service of the supermarket that may enhance the shopper’s health and well-being by assisting him or her in reaching personal health goals. Clinical and community RDs or RDNs may partner with local supermarket counterparts to provide consumer programs and share resources. This article provides an overview of some of the responsibilities of supermarket dietitians and the resources that they provide to consumers.

Programs and Roles
According to the 2012 Shopping for Health survey conducted by the Food Marketing Institute (FMI), the average supermarket offers 38,718 products (1). This overwhelming array of products, coupled with the claims on food product labels and nutrient recommendations from other sources, can create substantial confusion for consumers when shopping. This is
particularly true for customers who must follow careful dietary recommendations, such as those who have diabetes. In addition to searching for individual food items on the grocery store shelf, customers often need to assemble meals for an entire family with a variety of health issues and nutrient requirements. What a daunting task! This is where supermarket dietitians can help.

These professionals meet customers where they make a substantial number of their food purchasing decisions. Results of the FMI survey show that customers average 2.2 trips per week to their supermarket (1).

Either the dietitian is physically available to help the patient while shopping or he or she provides resources that may be used at another time. Customer demographics drive the products and services offered in a given supermarket, chain, or region of the country. The demographics also affect the diversity in roles for the supermarket dietitians. Nonetheless, these professionals represent a valuable resource for health care professionals and RDS or RDNs working in other settings. Their nutrition advice, resources, and meal solutions can complement the recommendations provided in the hospital or medical office to enable patients to reach their health goals.

Resources
The responsibilities and programs of supermarket dietitians from around the United States are described below, in addition to some of the resources that may be available in various regions.

Educational Materials
Many supermarkets have their own complimentary magazines, brochures, or newsletters to which the dietitian regularly contributes. These materials are typically available to customers in the store, online, and in the community and often cover specific topics or themes, such as National Diabetes Month. Becky Varner, MS, RD, LD, Corporate Dietitian with BUY FOR LESS based in Oklahoma, authors a monthly nutrition newsletter that is distributed at her presentations, the pharmacy counter, and local medical offices.

Online Resources
Websites are another avenue for nutrition education. Supermarket dietitians often provide content for a page on the company website and update it regularly. Recipes and menu plans are common requests. Meijer, based in Grand Rapids, MI, offers meal ideas with their weekly menus. Meijer Healthy Living Advisors, Maribel Alchin, MBA, RD, LDN, and Kristen Johnson, RD, LDN, ACE-PT, provide a weekly nutritious menu based on sale items at the store, with recipes and corresponding shopping lists. Websites may also provide allergen information, such as a gluten-free list, and an “Ask the Dietitian” section to assist customers with questions or health conditions.

Recipe how-to videos also have increased in popularity. Weis Markets, based in Sunbury, PA, offers cooking videos through their “Weis SuperMarkets” YouTube channel in a section called Recipes & Meals. Weis Markets’ Director of Lifestyle Initiatives, Karen Buch, RDN, LDN, and her team of RDs demonstrate easy, affordable, and healthful recipes while offering helpful nutrition tips. The videos are accessible on the company’s website, blog, and social media or by scanning QR codes that appear in the weekly ad circular, store signage, or their bi-monthly Weis Healthy Bites magazine.

Media: TV, Radio, Print
Supermarket dietitians are often asked for their professional insight, recommendations, and recipe ideas by local and national media outlets. Topic requests can range from budget-friendly meals to the latest nutrition research to recipes for people with diabetes and everything in between. Meijer Healthy Living Manager Shari Steinbach, MS, RD, appears on a regular monthly segment on one of the local television stations. In the “$10 Thursdays” segment, she makes a meal for a family of four for $10 or less, incorporating variety, affordability, and nutrition.

In addition to traditional media, supermarket dietitians are keeping up with customers through social media. Many are pinning recipes and cooking tips on Pinterest, sharing study results on Twitter, and offering suggestions on Facebook. Cindy Silver, MS, RDN, LDN, Smart Shopper Team Member for Lowes Foods based in Winston-Salem, NC, blogs on a variety of supermarket-related topics, including diabetes. Her blog is available at https://blogs.lowesfoods.com/cindy-silver/.

In-store Offerings
Customers can find a number of useful resources within the store itself. For people with diabetes, store tours can be very helpful. In some cases, the store dietitian leads the tour, but other tours may be led by community or hospital dietitians who have obtained approval from the store to host the tours. Cindy Silver, MS, RDN, LDN, often receives requests from a local diabetes center to lead grocery store tours for people with diabetes.

The Northern Kentucky Diabetes Coalition has established a partnership with a Meijer staff
dietitian and pharmacist (also coalition members) to provide free tours for northern Kentucky residents with diabetes twice a year. The Meijer staff dietitian is involved, but the coalition's members (RDs and certified diabetes educators) lead the tours.

Supermarket dietitians also help to plan in-store events. For example, Karen Buch, RD, LDN, reports that Weis Markets often holds special activities during National Diabetes Month. Event extras include diabetes-related articles, free glucose testing and blood pressure screenings, and free diabetes-focused store tours. Throughout the year, 90-minute interactive field trips, called Weis Mystery Tours™, are offered to teach children to make healthier food and activity choices. To date, thousands of children have taken part in this free educational opportunity.

Supermarkets provide other services for customers while they shop. According to the website for Hannaford, based in Scarborough, ME, staff dietitians offer free in-store classes and demonstrations. Other supermarket dietitians offer private counseling, often for a fee.

Nutritional Scoring Systems
Several supermarkets now have nutritional scoring systems to assist customers in making healthier choices while perusing the store aisles. Hy-Vee, Inc, headquartered in West Des Moines, IA, and Price Chopper, located in Schenectady, NY, were the first grocery stores in the United States to include NuVal® scores (2) on their product shelf tags. These scores range from 1 to 100, with higher numbers representing healthier products. Customers are encouraged to “trade up” to healthier choices with NuVal®. Rita Zapien, MS, RD, LD, CDE, of H-E-B, based in San Antonio, TX, initiated the nutritional shelf tag program in January 2013 and developed a “sugar-free” tag to help customers with diabetes.

Supermarket dietitians are often asked to give store tours or presentations to community groups demonstrating how to use the nutritional scoring system and explaining how these systems may assist people with different disease states. Although these are useful tools for shoppers, people with diabetes should be encouraged to always read the nutrition label before making their ultimate purchasing decisions.

Pharmacy Programs
Many supermarket pharmacies also are offering programs, medications, and services to help their customers with diabetes. According to Senior Nutritionist Ellie Wilson, MS, RD, Price Chopper offers the Diabetes AdvantEdge program through their pharmacies. With this program, a number of generic medications are available for no charge with a prescription, as are a blood glucose meter, lancing device, lancets, and syringes or pen needles. In addition, Price Chopper pharmacists offer medication management appointments to promote patient understanding and accurate delivery of self-administered medications. The dietitians at Price Chopper have also reached out to diabetes educators in their primary and peripheral markets to educate them about the pharmacy program and NuVal® system, encouraging inclusion of this information in their education program materials. Store pharmacists also partner with store dietitians for presentations to diabetes support groups, health fairs, and media segments.

Community Events and Partnerships
Supermarket dietitians are often active in local community events and programs, such as participating in health fairs by giving presentations or distributing materials. Becky Varner, MS, RD, LD, presents to senior groups and women's groups at the local Deaconess Hospital Oklahoma City, OK. BUY FOR LESS also partners with the American Diabetes Association (ADA) to cosponsor the Step Out: Walk to Stop Diabetes event and sponsors ADA's Tour de Cure events in their local community.

Clinical Application
Community and clinical dietitians can work with grocery store dietitians to share information and resources to provide their patients with consistent messages. Local supermarket dietitians can partner in providing store tours, cooking demonstrations, and other resources.

For more information on the supermarkets and dietitians mentioned in the article, visit the dietitian pages on their respective store websites:

<table>
<thead>
<tr>
<th>Supermarket</th>
<th>Website Address</th>
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<tr>
<td>BUY FOR LESS</td>
<td><a href="http://www.yourwellnessok.com">www.yourwellnessok.com</a></td>
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<tr>
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<td><a href="http://www.meijerhealthyliving.com">www.meijerhealthyliving.com</a></td>
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Summary
The role of the RD and RDN continues to evolve, and grocery stores are recognizing the benefits of having these professionals in the store and/or in the community to help their customers. Offering convenient access to nutrition advice from recognized health professionals can be a competitive edge for stores. The duties of the supermarket dietitian may include providing educational materials, online resources, media services, and in-store programs as well as partnering with pharmacy and staffing community events and programs. Working with others in their professional community, RDs and RDNs can provide patients, clients, and customers with accurate nutrition information, resources, solutions, and consistent nutrition messages to reach their health goals.

References

Disparities and Diabetes
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Abstract
Health disparities represent a significant social and economic problem in the United States. For example, a substantial number of all patients with diabetes can be found in rural communities and in racial and ethnic minorities. Despite culturally tailored patient, provider, and health system interventions, significant racial and ethnic disparities persist. Of note, income and education perpetuate disparate conditions more than ethnicity does. Disparities may be alleviated by addressing issues of access, utilization, and delivery of health care. Quality improvement programs and personalized electronic medical records promote consistency in the delivery of health care. Current education standards address greater access to health care and individualized education to acknowledge differing socioeconomic and community resources and patient needs.

Introduction
Disparities among patients with diabetes represent a significant problem. According to Centers for Disease Control and Prevention (CDC) data, diabetes prevalence among minorities is twice that of white persons (1). Unequal Treatment: Confronting Racial and Ethnic Disparities in Health Care, an Institute of Medicine (IOM) report, mentions Healthy People 2010 and The Cross Cultural Health Care Program as interventions at the federal level designed to address health disparities in minority populations (2).

However, a systematic review published in 2008 found that despite culturally tailored patient, provider, and health system interventions, racial and ethnic disparities persist (3).

Patients in rural communities are also more likely to have diabetes than those outside of rural communities (4). An assessment of Healthy People 2010 commissioned by the CDC indicated that the prevalence of diabetes is approximately 16% higher in rural communities compared to urban communities (5).

Both the CDC assessment and Healthy People 2010 also have noted income disparities, with higher incomes enabling greater access to care, advanced levels of education, and increasing engagement in healthy behaviors, including exercise, diet, and access to nutrient-dense foods (5,6). Reducing disparities in diabetes care requires improved access to care, increased access to healthy foods, and greater education of patients about the disease.
Quality Improvement Studies

In 1990, the Journal of the American Medical Association published a report addressing disparities in health care, recognizing that African-Americans without health insurance must be ensured access to health care, whether it is via an employer or through Medicaid. The report cited income differences as the most important issue related to health care disparities and noted that health disparities reflect inherent disparities in income and education. The authors called for greater awareness of these disparities by physicians through an open discussion in curricula and practice journals to address disparate medical practice decisions. The report recommended health insurance reform and greater efforts to increase the number of minority service providers who are better equipped to respond to a variety of sociocultural factors that lead to disparate care.

From 1997 to 2001, Harvard Vanguard Medical Associates (HVMA) implemented a quality improvement (QI) program that used patient outreach and physician reminders to improve access to care for underserved populations. A survey of the HVMA QI program revealed that African-American patients in 1997 were less likely than their white counterparts to achieve glycemic targets, as measured by glycated hemoglobin (A1c) values, with 24% of African-American patients meeting targets compared to 33.6% of white patients. This difference remained essentially unchanged in 2001, with respective percentages of 26% and 35.5%. Annual measurement of A1c decreased in this same time period, although not significantly, for African-American patients, moving from 78.5% in 1997 to 77% in 2001.

The slight increase in A1c testing for whites during these years was also deemed insignificant (75.6% to 76.3%). The authors concluded that disparities in A1c (i.e., glycemic control) persisted, despite institution of a QI program.

In 2010, Baig and associates updated the 2008 review of QI studies focusing on unresolved diabetes disparities, despite individualized care. The group examined 18 studies conducted from 2006 to 2009 for the overall effect of QI programs on diabetes disparities among minority populations. Patient-oriented initiatives, particularly those involving cognitive-behavioral education and self-care instruction, improved a range of outcomes. However, neither provider- nor system-oriented intervention resulted in any statistically significant improvement in blood glucose or A1c values. Eight studies specifically used health information technology-based QI programs. Unlike results from the overall QI studies, results from the patient-oriented initiatives in the technology-based interventions were mixed. Of note, a 2002 study by Levetan and colleagues showed that a computer-generated, personalized laboratory report paired with education held promise in improving outcomes but required the use of electronic medical records. Provider- and system-oriented technology-based programs reviewed in 2010 were successful, with statistically significant improvement in A1c.

In a clinical setting, improved communication and patient-oriented education via electronic medical records has been shown to ameliorate diabetes disparities and has been encouraged by the federal government via the Patient Protection and Affordable Care Act. More specifically, Healthy People 2020 details a national infrastructure for electronic medical records, which addresses the crucial problem of treating diabetes patients via a universally uniform process.

National Diabetes Self-Management Education

Alleviating disparity includes addressing issues of access, utilization, and delivery of health care. The National Standards for Diabetes Self-Management Education (DSME) and Support (DSMS) address these issues within their guidelines for tailoring education and maintaining quality control. The standards include a framework for educators to build programs around the needs of the population served. Individualizing the education to address known hindrances, such as literacy, can reduce disparities in the patient population. However, access to education may be thwarted if the patient is underinsured.

Among all people with some form of health insurance, Latinos, African Americans, and Native Americans are more likely to have some form of public health insurance, such as Medicaid, than private insurance. Data provided by the American Diabetes Association indicate that more than 14 million Americans with diabetes have Medicaid or Medicare insurance to help with their health care expenses. The Patient Protection and Affordable Care Act established a state-administered Medicaid incentive program to demonstrate the effectiveness of providing incentives via a chronic disease prevention grant that could include a goal of preventing or improving management of diabetes.
Health Literacy

Health literacy has emerged as the pivotal determinant of disparate care in chronic disease management. Health literacy includes acquisition of health communication in both oral and print forms. Primary care-based studies have shown an improvement in diabetes-related knowledge as health literacy is addressed (16). The Special Diabetes Program for Indians is a $150 million federal grant awarded annually for treatment and prevention of diabetes that was created in response to the high prevalence of the disease among Native Americans (17). Brega and colleagues (18) examined the relationship between health literacy and glycemic control and found that diabetes self-management knowledge was the prominent construct between health literacy and A1c for Native Americans.

Cultural norms are influential within the family and community environment, but their translation differs from family to family. In contrast, greater educational attainment more reliably improves health literacy. The Jackson Heart Study tracked the cardiovascular outcomes of a cohort of 4,303 African Americans (19). The researchers compared socioeconomic status data with existing diabetes self-management knowledge, awareness of diabetes treatment, and glycemic control. Socioeconomic status was associated with diabetes prevalence but not with glycemic control (19). Funding mechanisms developed by the National Institute on Minority Health and Health Disparities for community-based participatory research (CBPR) support powerful interventions that confirm the adoption of diabetes self-management practices. CBPR uses community health/lay health workers, patient health navigators, or health advisors as integral parts of the research process (19,20). The cost-effective strategies of choosing an appropriate self-management class or receiving at-home one-on-one diabetes education resulted in reductions in A1c (20). CBPR was part of the strategy for community health advisors working with an older adult Chinese community to increase engagement in nursing interventions offered at their community site (21). Those advisors guided the researchers in identifying culturally appropriate motivational strategies to reach the elders and disseminated the findings back to the elder.

Natale-Pereira and colleagues (22) highlighted the congruence of patient navigators with all four areas of the Patient Protection and Affordable Care Act. The navigators modeled positive behaviors to their community members, such as attending health screenings so that problems might be detected early on, when treatment may be more effective. Navigators facilitated access to care by providing transportation to appointments, mapping out routes to clinical offices, and navigating through the insurance or fee-for-service process to prepare the community member for his or her appointment. Trained navigators can assist patients in achieving consistent outcomes when applying for health insurance. Cultural barriers are reduced by the navigator residing in the same neighborhood. This strategy enhances cultural competence in health care delivery (21).

National Efforts

The Let’s Move Campaign, originated by First Lady Michelle Obama, targets eliminating childhood obesity with four strategies: supporting parents to make healthy family food choices; serving healthy food in schools; increasing access to affordable, healthy food; and increasing physical activity. To assist in providing access to food, federal funding has made it possible to bring grocery stores and farmer’s markets to the “food deserts” of the underserved communities. For more information, visit www.healthycommunitieshealthyfuture.org.

In her IOM report, Paula Braveman linked education attainment to health achievement via health knowledge, literacy, behaviors, work conditions, income and resources, a personal sense of control, social standing, and social support (14). Dennis Andrulis recommended more research to create and test interventions that train and educate health care organizations and practitioners in the use of broader inter-sector strategies to promote health and prevent chronic illness (14). Diabetes educators are well-positioned to contribute to research in this area that can further identify and assess the benefits of changing practices in various resources. Examples include
homeless shelters serving healthy meals to their clients, community centers offering free exercise classes, volunteer clubs providing low-cost transportation to medical appointments or grocery stores, and neighborhood farmer’s markets offering locally grown fresh produce and dairy products.

The National Center on Minority Health and Health Disparities (NCMHD) is responsible for development of the Health Disparities Strategic Plan and Budget from the National Institutes of Health (NIH). The strategic plan outlines health disparities research priorities for each of the 27 NIH institutes and centers. The plan will be posted on NCMHD’s website for public recommendations. Current strategies to reduce disparate care include health system change through evidence-based QI to provide standardized care to all patients as well as health care reform measures addressing the medical home, personal health records, and electronic medical records.

Summary
Health disparities remain a significant problem in the United States. For people with diabetes, continuing disparities increase the risk for disability due to poorly managed glucose control. The problem runs deeper than independent contributing factors of low socioeconomic status and poor health literacy. Ongoing studies are seeking to clarify the specific needs of affected populations. Changes in both the health care system and professional practices can eliminate disparities in the future by addressing issues of access, utilization, and delivery of health care. The national partnership combines resources from various sectors to address community needs, but the effectiveness of these efforts remains to be seen.

References
Addressing Food Insecurity in Diabetes Management

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Abstract

More than 50 million Americans live in households that are considered “food insecure,” in that they lack access to foods for a nutrient-dense diet, which increases the risk for developing type 2 diabetes. In addition to providing traditional components of diabetes education, discussing food access and screening for food insecurity enables registered dietitians (RDs) and registered dietitian nutritionists (RDNs) to offer additional support and strategies to help patients manage their diabetes well. The Patient Protection and Affordable Care Act community health needs assessment can place hospitals and health care facilities in a position to identify community food security concerns and forge partnerships to support patients’ access to food for improved health outcomes.

Patient Story

“I don’t know what’s wrong with him. You fix him.” These were the physician’s words as he handed me the chart for Dennis, a man in his late 40s. Dennis’ type 2 diabetes had led to renal failure that was progressing at a faster pace than the doctors had expected. “I think it might have something to do with what he’s eating,” my colleague added.

Years ago, as a young dietitian working in the outpatient chronic renal failure clinic of a Boston hospital, I counseled patients on ways to manage their complex nutritional needs related to declining renal function, most often resulting from poorly controlled diabetes. I was an active member of the team, but this was the first time the physician had specifically identified a patient’s nutrition habits as playing such a critical role in medical management.

Married with two children, Dennis was unable to work because of his failing health. His family relied on income from his wife’s hourly-wage job, along with modest Supplemental Social Security Disability payments. In addition, they qualified for benefits from the Food Stamp Program (now the Supplemental Nutrition Assistance Program) to purchase food. As I spoke with Dennis about his eating and shopping habits as well as decisions about family food choices, it became clear that he didn’t have sufficient resources to feed his family. Dennis ate well the first 2 weeks of the month but then would skip meals because there wasn’t enough for everyone to eat. A proud father, he admitted that by the last day or two of the month, the family was scraping by and, as a result, he ate very little. “I’d never take the food if it meant that my kids couldn’t eat,” he explained. As a result, his health had suffered.

The damage from poorly controlled diabetes progressed to end-stage renal disease for Dennis within a few months. He began hemodialysis treatments and eventually received a cadaver kidney transplant. Unable to manage the medications for the transplant, his body ultimately...
rejected the organ. Dennis resumed hemodialysis and began the process for a second kidney transplant.

Introduction
This story is not unique. Regular access to nutrient-dense foods is a struggle for more than 50 million Americans. Nearly 15% of households in the United States are considered food insecure (1), with resources so limited that attaining foods for a balanced diet is nearly impossible. Families living in the 18 million households that face food insecurity employ a variety of coping strategies to survive, such as purchasing cheaper, high-calorie foods instead of ingredients for balanced meals and skipping meals or cutting the size of the meals to assure that the children have enough to eat. Caregivers in these homes are troubled by this struggle; 99% of respondents in a food insecure household report having worried that their food would run out before they had money to buy more.

Over the long term, the poor-quality diet that comes from living with food insecurity takes a toll on health. Adults living with the most severe food insecurity are more than twice as likely to develop type 2 diabetes as individuals who are food secure (2).

Those who have type 2 diabetes and are food insecure are faced with substantial challenges in their attempts to follow a proper diet for diabetes. Research on food-insecure clients in a safety net hospital setting found that poor food habits resulted in poor blood glucose control and increased the burden of living with diabetes (3). With limited self-efficacy and poor glycemic control, such individuals are often consigned to a path of poor health behaviors, long-term health complications, and a continued cycle of food insecurity.

Clinical Application: Supporting Patients Who Live in Food Insecure Households
Although the physician seeing Dennis in the clinic noted that his poor glycemic control was diet-related, physicians generally do not identify food insecurity (4). Patients are not likely to divulge their economic hardships unless asked specifically about them. Further, health care providers do not always feel comfortable addressing these issues, especially when they have no resources to assist the patients. Helping patients with food insecurities to manage their diabetes begins with using tools to identify the problem. A two-item food insecurity screen has been validated with the 18-item United States Household Food Security Scale (5). This screening tool (Figure) can be useful in the clinical setting, providing clinicians and health educators with language to address the difficult topic of food access.

Counseling sessions provide opportunities for RDs or RDNs and diabetes educators to discuss food security status as well as strategies for improving food access as part of diabetes self-management education. The dietary habits that individuals and families adopt to cope with food insecurity often lead to consumption of high-calorie, high-glycemic index foods and a diet that is limited in fruits, vegetables, whole grains, and fiber. Such habits are inconsistent with nutrition guidelines for diabetes, but patients may not understand how to shop for nutrient-dense foods or plan and cook healthy meals that fit within their budget. A discussion of food shopping and meal preparation can help relieve some of the anxiety caused by having limited food resources. It may also identify opportunities to make small and realistic changes to increase the intake of nutrient-dense foods, contributing to an improvement in blood glucose management and overall health.

Strategies for the clinician may include food assistance referrals and education:
• Provide referrals to food pantries or the local food bank for food assistance. Healthy choices often include fresh produce; brown rice and other whole grains; canned tuna, salmon, and chicken; frozen meats; and low-sodium canned vegetables. Increasingly, food banks are expanding their purchasing programs to ensure that these food items are available on a consistent basis.
• Ask about current participation in federal nutrition programs, including the Supplemental Nutrition Assistance Program (SNAP) as well as the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC). Provide application information and encouragement to apply, if needed.
• Discuss shopping strategies to maximize SNAP benefits and limited food dollars. Strategies may

Figure. Two-item Food Insecurity Screener
1. Within the past 12 months have you worried whether your food would run out before you got money to buy more?
2. Within the past 12 months, has the food you bought not lasted and did you have no money to get more?

For clients answering yes to both of these questions, issues of food insecurity should be addressed.
include purchasing food items in bulk and participating in local farmers’ markets, Community Supported Agriculture programs, and SNAP program produce incentives. Food bank education programs and community nutrition programs such as Share Our Strength’s Cooking Matters™ and Shopping Matters™ are designed to address the challenges of clients who are experiencing food insecurity. Referrals and subsequent participation in these programs can offer the additional benefit of peer support.

Community Health Needs Assessment
Social and environmental factors are vital to effective prevention and management of diabetes (6), and health care institutions can play an important role in advancing the understanding of these connections. The Patient Protection and Affordable Care Act mandates that certain hospitals and health centers conduct a community health needs assessment (CHNA) every 3 years and adopt an implementation strategy to address the priority health needs of the community. In low-income communities across the country, such assessments highlight the challenges related to access to health care and the barriers that families face as they attempt to achieve healthier lifestyles.

Conducting the CHNA in collaboration with other community-based organizations can serve as a starting point for collaborative efforts to support community health needs. RDs and RDNs are uniquely qualified to participate as members of the CHNA team and can encourage the inclusion of community organization health care representatives, such as leaders from the local food bank, faith-based organizations, and other human service organizations. Such efforts can promote the inclusion of perspectives from clients living with food insecurity during the assessment process, while bringing potential partners and thought leaders together to consider creative program and policy solutions.

Following are several examples of how hospitals and community clinics can address food insecurity:

- Offer SNAP outreach and enrollment assistance onsite
- Partner with the local food bank to offer a produce distribution or full food pantry at the hospital or clinic, making food immediately available to patients who are food insecure
- Start a farmers’ market to make produce accessible to patients and staff and accept electronic benefit transfer (EBT) so SNAP benefits can be used to purchase produce
- Partner with food bank programs to support nutrition and health education in community settings

Feeding America (www.feedingamerica.org), the nation’s largest domestic hunger relief organization, works on the front line providing access to meals for 37 million food-insecure individuals each year. Recognizing the link between food insecurity and health, Feeding America has a number of initiatives to improve access to nutritious food, nutrition education, and research on food insecurity and health outcomes.

- Future of Foods: Feeding America is partnering with the Academy of Nutrition and Dietetics and the National Dairy Council to identify new approaches to nutrition education and food access that can affect how food-insecure individuals nourish themselves and their families. Visit the online Healthy Food Bank Hub (http://healthyfoodbankhub.feedingamerica.org) for nutrition tools and resources to support clients struggling with insecurity.

- Diabetes Initiative: Funded by the Bristol-Myers Squibb Foundation, this 3-year pilot project is exploring the relationship between diabetes and food insecurity. Three food banks in California, Ohio, and Texas are identifying clients with diabetes, providing boxes of diabetes-appropriate foods, offering nutrition and health education, and assuring that clients access health care and diabetes self-management services. Early data from this pilot project show promising improvements in clients’ health status and diabetes management.

- Foods to Encourage: In 2012, Feeding America adopted a Foods to Encourage standard to measure nutritional quality of the food distributed through the food bank network. This approach more closely aligns with food groups highlighted in the 2010 United States Department of Agriculture Dietary Guidelines for Americans, including fruits and vegetables, whole grains, low-fat dairy, and lean protein. Further, the initiative seeks to meet guidelines regarding the consumption and limitation of specific nutrients known to be of greatest public health concern, such as saturated fat, trans fat, sodium, and added sugars.

Conclusion
Food insecurity is a problem for millions of Americans but is not always identified or well-addressed in the clinical setting. Individuals without sufficient access to nutrient-dense foods and a healthy diet are at increased risk for type 2 diabetes.
and face more challenges with diabetes self-management and diabetes distress once living with the disease. RDs, RDNs, and diabetes educators can use a two-item food insecurity screening tool to identify clients in need of additional support for food access. As part of the CHNA process, health care organizations can forge partnerships with other agencies to support food security strategies for the benefit of clients and patients experiencing this widespread problem.

References

Advocacy and Health Policy at Every Level
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Abstract
The registered dietitian (RD) and registered dietitian nutritionist (RDN) who specialize in diabetes can have a positive impact on federal, state, and local health care polices and advocacy pertaining to diabetes issues. Each RD and RDN should have a comprehensive understanding of resources available to effect such changes. Among the various agency initiatives discussed in this article are the Health Impact Assessment tool from the Centers for Disease Control and Prevention (CDC) and websites from county areas. The Academy of Nutrition and Dietetics also is helping members to become strong proponents of policies supporting diabetes care and education, highlighting the important role of RDs and RDNs in providing superlative care. Well-informed professionals can better strategize where to focus efforts to help meet the needs of those in our communities.

Introduction
Diabetes has the potential to overwhelm the health care system (1), based on the sheer numbers of those with diabetes and prediabetes. Everyone within the health care system should aid in developing local, state, and federal public health advocacy and health policies to address this huge issue. Sometimes the lack of education or good housing as well as poverty and unequal access to services and opportunities may affect health care more than a clinical visit. For these reasons, registered dietitians (RDs) and registered dietitian nutritionists (RDNs) should actively work toward making communities healthier.

Federal Programs
The Patient Protection and Affordable Care Act (ACA) has many aims, one of which is to improve public health by investing in the expansion of clinical preventive care and community initiatives. The ACA also establishes the Prevention and Public Health Trust Fund to help support the associated financial outlay. As diabetes educators with expertise in medical nutrition therapy, RDs and RDNs should be conversant with local, state, and national resources that can enhance advocacy efforts on behalf of our patients (2).

State Programs
One example of a successful state effort is the creation of a framework for patient resources at the community and state levels in the Commonwealth of Massachusetts. “Health Care for All” is a nonpartisan research and education-focused organization that was established in 2007 to address the fact that traditional models of health care were not working. According to their mission statement (3), the organization seeks “to create a consumer-centered health care system that provides comprehensive, affordable, accessible, culturally competent, high quality care and consumer education for everyone,
especially the most vulnerable. They work to achieve this as leaders in public policy, advocacy, education, and service to consumers in Massachusetts (3). One result of these efforts is a change in the health care system that ensures coverage for all citizens of the Commonwealth.

In June 2012, a new coalition, the “Massachusetts Health Promotion and Chronic Disease Partnership” (HP&CD), was established following a directive from the Institute of Medicine (4). The reasoning was that although health care was available for all citizens in Massachusetts, the needs of the greater population remained unmet. For example, diabetes control appeared to have improved, but the risk of developing diabetes had increased (5).

The goal of the coalition was to shift organizations from working in isolated “silos” to working together via a holistic approach toward health promotion and disease prevention. Recommendations included the development of comprehensive chronic disease plans that involved community-based efforts and a suggestion that the Centers for Disease Control and Prevention should explore the Health in All Policies (HiAP) approach, with the Health Impact Assessment (HiA) as a means of evaluation. HiAP is a strategy to assist leaders and policymakers in integrating considerations of health, well-being, and equity during the development, implementation, and evaluation of policies and services. Such strategies are designed to ensure that all policies and services from all sectors have beneficial or neutral impacts on the determinants of health. HiA is a tool that local health departments and others can use to assess a single proposed decision and its potential impact on health (6).

The HP&CD established 6 disease-related goals, 11 objectives, and 7 communities of practice. The groups are organized by function rather than by disease. All participants in HP&CD have equal opportunities to provide input into improving the places that people live, work, and play in the hope of enhancing healthier options. More details about the coalition can be found at: http://www.mass.gov/eohhs/gov/departments/dph/programs/community-health/health-promotion-and-chronic-disease-prevention.html. In addition to this new coalition, the Massachusetts Department of Public Health has...
been reorganized to meet the challenges of the changing health care arena.

County Programs
RDs and RDNs can research efforts of their local communities in improving the health of their citizens by visiting the County Health Rankings & Roadmaps (CHR&R) website (7). In addition to general information, the website can provide possible foci for program development and interventions in individual communities (7). This joint initiative through the Robert Wood Johnson Foundation and the University of Wisconsin Population Health Institute provides information that ranks counties according to health outcomes (morbidity and mortality) and health factors (health behaviors; clinical care; and social, environmental, and economic factors). Lower numbers indicate better rankings. For example, Middlesex County in Massachusetts ranks second in health outcomes (Fig. 1) and third in health factors (Fig. 2).

Electronic Medical Records
One component of the ACA is the implementation of the electronic medical records. This federal public health initiative can lead to the adoption of population care management tools by primary care practitioners. As an example, Massachusetts Institute of Technology Medical uses the Allscripts® program to identify patients who are at high risk for developing diabetes complications and seeks to develop specific interventions to reduce these risks. The breadth of benefits the electronic medical record can provide for clients has yet to be fully realized. One possibility, recommended by Klompas and associates (11), is use of the Electronic Medical Record Support for Public Health surveillance platform. This platform can provide surveillance data on diabetes prevalence, care, and complications.

Academy of Nutrition and Dietetics Efforts
In 2005, the Academy recognized the impact that an electronic medical record system would have on the dietetics profession and established a joint program with the American Medical Informatics Association. The 10x10 Informatics Education Program goals are to train a workforce to help improve the health of all. For more information, see: http://www.eatright.org/HealthProfessionals/content.aspx?id=6442468718.

Another agency that offers training on public health initiatives is the Diabetes Training and Technical Assistance Program. Demystifying the World of Public

### Table 1. Potential Community-based Advocacy Initiatives

<table>
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<tr>
<td>Recreation and parks departments: create safe parks</td>
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<tr>
<td>State health departments: establish screening or prevention programs</td>
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<tr>
<td>City planners: develop bike-friendly roads</td>
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<tr>
<td>Redevelopment agencies: raise garden beds</td>
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<tr>
<td>Transportation agencies: improve public transportation options</td>
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<tr>
<td>Faith-based organizations: offer diabetes program</td>
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<tr>
<td>Community leaders: advocate for healthy changes</td>
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<tr>
<td>Schools: create nutrition guidelines or safe walking routes to school</td>
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<tr>
<td>Healthy Food Access (14): improve healthy food access in groceries in underserved communities</td>
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<tr>
<td>Business: establish wellness programs</td>
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<tr>
<td>Local aging centers/senior centers: develop specific disease management programs</td>
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<tr>
<td>Foundations: create grant opportunities</td>
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The Academy also has established several public health priority areas: aging, child nutrition, food and food safety, health literacy and nutrition advancement, medical nutrition therapy, nutrition research and monitoring, and weight management for health. Academy members can enhance their knowledge and skills pertaining to public health policy by attending the annual Public Policy Workshop. For more information, visit: http://www.eatright.org/ppw/.
Health Policy (12) and Emory’s Diabetes Today: Planning for Coalition Action (13) can be of particular help.

Translating Information Into Action
Active participation by diabetes educators in the public sector can reduce the size, slow the progression, and reduce the severity of the diabetes “tsunami.” They can shape health policy and implementation at all levels of government as well as in individual workplaces. Diabetes educators have a responsibility to advocate for people with diabetes, and they bring a set of lifesaving skills to the table with their knowledge and unique understanding of diabetes self-management education and support.

Advocacy efforts can range from working to establish a local bike path to funding prevention-related programs at the state level or another area where gaps have been identified (Table). Advocacy also includes actions as basic as voting in the next national election. Embrace the opportunity to let your voice be heard by finding an organization or cause where you can make a difference! What’s your passion?

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CPE Credit Self-Assessment Questionnaire

Select the one best answer for each question below.

1) Area Agencies on Aging:
   a. Are limited in number and difficult to locate
   b. Are typically recognized as Medicare providers and can bill for health services
   c. Have become competitors to traditional hospital or clinic diabetes program providers
   d. Need a health care partner who can provide Medicare services to seek reimbursement

2) Select the correct statement:
   a. Community-based diabetes programs led by Area Agencies on Aging can serve as referral resources
   b. Older adults may be more likely to attend diabetes programs in their own churches, the senior center where they have lunch, or the recreation facility where they attend exercise classes
   c. Providing the opportunity to learn diabetes self-management skills in a familiar community-based environment may enhance an older adult’s ability to learn
   d. All are correct

3) An evidence-based community program which can assist individuals with diabetes in their engagement, confidence, and glycemic control is:
   a. Agency on Aging Program
   b. Better Choices Better Health Diabetes
   c. National Education Program
   d. Weight Loss Now

4) The Virtual Lifestyle Management Service Program:
   a. Has been shown to be effective in weight management and diabetes prevention
   b. Has minimal supportive outcome data after the first year of trials
   c. Had poor outcomes in diabetes management for a majority of participants
   d. Had unexpected results with increased blood pressure in participants

5) NuVal scores on grocery shelf tags indicate:
   a. Calories per serving
   b. Foods that are gluten free
   c. Relative nutrition quality of the item
   d. Value products at low cost

6) Select the correct statement:
   a. The implementation of electronic medical records is not a component of The Patient Protection and Affordable Care Act
   b. “Health care for All” is an organization that focuses on creating physician-centered health care system
   c. The Health Impact Assessment is a tool to evaluate the potential effects of a single proposed decision on health outcomes
   d. High numbers indicate better county rankings in the County Health Rankings & Roadmaps website

7) Which of the following(s) can help to alleviate health disparities?
   a. Providing better access to care
   b. Tailoring education to the needs of the population
   c. Recognizing and addressing the problem of health literacy
   d. All of the above

8) According to Centers for Disease Control and Prevention, the prevalence of diabetes is:
   a. Higher in white persons than minorities
   b. Lower in white persons than minorities
   c. Higher in urban than rural communities
   d. The same across all racial and ethnic groups

9) What is the relationship between food insecurity and diabetes?
   a. Individuals who are living with food insecurity are more likely to develop type 2 diabetes
   b. Individuals who are living with food insecurity are less likely to develop type 2 diabetes
   c. There is no relationship between food insecurity and diabetes
   d. The relationship between food insecurity and diabetes is unknown

10) Mandated by the Patient Protection and Affordable Care Act in some health centers and hospitals, the community health needs assessment:
    a. Is conducted every 5 years
    b. Highlights the barriers and challenges that families face in achieving healthier lifestyles
    c. Is a process that RDs and RDNs are not qualified to participate in as part of the team
    d. Cannot be conducted in collaboration with other community-based organizations

After reading this issue of On The Cutting Edge, “Public Health and Community Resources: Meeting Diabetes Head-On”, DCE members can earn 3.0 hours of free continuing professional education units (CPE level 2) approved by the Commission on Dietetic Registration (CDR). CPE eligibility is based on active DCE membership status from June 1, 2013 to May 31, 2014.

DCE members must complete the post-test of the CPEs page on the DCE website: http://www.dce.org/resources/cpeus by 12/31/2016. For each question, select the one best response. After passing the quiz, to view/print your certificate, access your CPEU credit history or view the learning objectives, go to: http://www.dce.org/account/history.

Please record 3.0 hours on your Learning Activities log and retain the certificate of completion in the event you are audited by CDR. The certificate of completion is valid when the CPE questionnaire is successfully completed, submitted, and recorded by DCE/Academy of Nutrition and Dietetics.

After passing the quiz, to view/print your certificate, access your CPEU credit history or view the learning objectives, go to: http://www.dce.org/account/history.
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RD/RDN/DTR Number: __________________________
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Head-On
CDR Activity Number: 112833 (Exp 12/31/2016)
Date Completed: ___________ CPEUs Awarded: ___ 3.0 __
Learning Need Code: ___________ CPE Level: ___ 2 ___

Provider Signature

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Participant Name: ____________________________
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LETTERS TO THE EDITOR

Have you ever wanted to ask an OTCE author a question after reading an article? Did you ever disagree with an author? Or maybe you just wanted to comment on something you read. The Letters to the Editor column is a forum to ask questions or comment about any of the OTCE articles that interest you. Please send your questions or comments to the OTCE editor at the following address:

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Let us hear from you!