

5-14-2018

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Suzanne M. Prevedel  
*Utah State University*, [suzanne.prevedel@usu.edu](mailto:suzanne.prevedel@usu.edu)

Cindy Nelson  
*Utah State University*

David Buys  
*Mississippi State University*

Linda Cronk  
*Michigan State University*

Valerie Duffy  
*University of Connecticut*

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### Recommended Citation

Prevedel, S. M., Nelson, C., Buys, D., Cronk, L., Duffy, V., Garden-Robinson, J., Horowitz, M., McGee, B., Reicks, M., Remley, D., & Warren, T. (2018). Cooperative Extension as a Partner in Creating Healthy Communities: An Environmental Scan. *Journal of Human Sciences and Extension*, 6(2), 4.  
<https://scholarsjunction.msstate.edu/jhse/vol6/iss2/4>

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### Authors

Suzanne M. Prevedel, Cindy Nelson, David Buys, Linda Cronk, Valerie Duffy, Julie Garden-Robinson, Marcel Horowitz, Bernestine McGee, Marla Reicks, Daniel Remley, and Tamara Warren

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**Suzanne M. Prevedel**

**Cindy Nelson**

*Utah State University*

**David Buys**

*Mississippi State University*

**Linda Cronk**

*Michigan State University*

**Valerie Duffy**

*University of Connecticut*

**Julie Garden-Robinson**

*North Dakota State University*

**Marcel Horowitz**

*University of California*

**Bernestine McGee**

*Southern University A&M College*

**Marla Reicks**

*University of Minnesota*

**Daniel Remley**

*The Ohio State University*

**Tamara Warren**

*Alabama Agricultural and Mechanical University*

*Nationally, researchers and practitioners from all disciplines have been tasked with fully collaborating to reverse overall decline in health. One overarching goal of the Healthy People 2020 initiative is to attain high-quality, longer lives free of preventable disease, disability, injury, and death (U.S. Department of*

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Direct correspondence to Suzanne M. Prevedel at [Suzanne.prevedel@usu.edu](mailto:Suzanne.prevedel@usu.edu)

*Health and Human Services, Office of Disease Prevention and Health Promotion, 2017). Since Cooperative Extension System (CES) programs engage citizens in every county in the U.S., the objectives of the Chronic Disease Prevention and Management (CDPM) Action Team were to identify (1) existing curricula, projects and programs currently implemented and (2) perceived barriers to health-related programming. The team constructed an environmental scan to capture the scope of health and wellness programming from Extension administrators, faculty, and agents/educators engaged in CDPM related programs and partnerships. Information from 152 respondents was reported for 69 programs from 17 states, representing all CES regions. Programs represented a wide range of topics, including diet/nutrition, physical activity, housing, and gardening, delivered in conjunction with a variety of community partners. Barriers to health-related programming primarily included lack of organizational support, time, training and knowledge, funding, and perceptions of priorities. The data provided a snapshot of current CES health-related programming and challenges of a comprehensive coordinated pathway to long, healthy lives.*

**Keywords:** health and wellness, chronic disease prevention and management, curriculum, Cooperative Extension, Extension, health programming, Health and Wellness Framework, ECOP Action Teams

### **Project Overview**

The purpose of this national Cooperative Extension (Extension) project was to identify existing programs, curricula, partnerships, and projects that address chronic disease prevention and management that are implemented throughout the Cooperative Extension System (CES). The authors, members of the Chronic Disease Prevention and Management (CDPM) Action Team, selected the method of environmental scanning to gather this information. An environmental scan is a process used by organizations to identify information needs, seek that information, and use it (Choo, 2001). According to Graham, Evitts, and Thomas-MacLean (2008), an environmental scan is recognized as a valuable tool in assessing and planning health programs and activities. By broadly disseminating the results, the CDPM team hopes to engage stakeholders within the Cooperative Extension System to act to create healthy and safe communities across the United States.

### **Background**

The Extension Committee on Organization and Policy (ECOP) released the Cooperative Extension's National Framework for Health and Wellness, authored by Braun et al. (2014). ECOP called on all Extension professionals to work together to increase the number of

Americans who are healthy at every stage of life by creating healthy and safe environments and improving individuals' preventive health behaviors. The CES Framework for Health and Wellness identified the following priority areas: Health Literacy, Health Insurance Literacy, Healthy Policy Issues Education, Positive Youth Development, and Chronic Disease Prevention and Management and Integrated Nutrition, Health, Environment, and Agriculture Systems.

Action Teams for five of the six priority areas were formed in 2015 through an invitation sent to all Extension directors seeking interested persons to serve on teams in the identified priority areas. The teams were tasked with researching how the CES could have increased positive impact on health and wellness. The Action Teams worked under the umbrella of the Association of Public and Land-grant Universities' (2016) Healthy Food Systems, Healthy People Initiative. The five Action Teams hoped to leverage a national movement to address known public health issues with leadership and community resources within the Cooperative Extension Land-grant University System.

### Methods

The CDPM Action Team followed Albright's (2004) five-step process in completing the environmental scan: (1) identify the environmental scanning needs, (2) gather the information, (3) analyze the environment, (4) communicate the results, and (5) make informed decisions.

The environmental scan survey was conducted using Qualtrics®, an online survey software. An invitation to participate was disseminated through an email list of Land-grant institution Extension directors. Extension administrators completed the survey or asked faculty and field agents/educators to complete the survey. The survey instrument was open for nine weeks. The study was reviewed by the Mississippi State University Institutional Review Board and was deemed exempt.

Survey participants were asked to list CDPM programs currently implemented in CES, along with audiences served, program objectives, evidence-based practices, resources and curricula utilized, evaluation processes, partnerships, and barriers to action. For the purposes of this environmental scan, a program was defined as an organized purposeful set of educational activities and/or experiences that address predetermined outcomes. Health-related programs were defined as encompassing the following focus areas: healthy nutrition, physical activity, disease specific management, stress management, social/emotional health, and other health-related topics. Additionally, participants were asked to select all perceived barriers to delivering CDPM educational programming from a predefined list.

Data analysis methods included two independent coders who calculated descriptive statistics, tabulated programs submitted, and categorized them according to the themes they addressed.

Survey responses were obtained from 152 participants throughout the United States, providing information about 144 programs, in 17 states. Incomplete information was provided for 75 of the programs. Complete information was received for 69 programs.

### **Environmental Scan Survey Results**

The CES health programming reported in the survey addressed issues faced by a variety of audiences: youth, families, adults, older adults, and individuals and families with limited resources. The survey respondents focused on programs that addressed the prevention and management of common chronic diseases and conditions, including diabetes, cancer, heart disease, osteoporosis, and asthma. Extension wellness promotion and prevention crossed a broad spectrum. Topics included diet/nutrition, physical activity, housing, and gardening. The only curriculum reported multiple times was Dining with Diabetes, originally developed by the West Virginia Cooperative Extension circa 1997 as a series of three cooking and nutrition classes. The updated curriculum is used broadly throughout the CES.

A variety of community partners were identified that crossed multiple strata of civic organizations, including community, city, county, state, and federal government agencies. Other public and private partners included schools, healthcare organizations, recreation programs, foundations, farming, business, and retail organizations. One example was the community health coalition project “Shaping Elizabeth” in New Jersey, which was partially funded through the Robert Wood Johnson Foundation. A respondent provided the following quote about the Shaping Elizabeth program:

We just got a mobile unit from the Food Bank to deliver fresh fruit/vegetables to a section of the city of Elizabeth once a month starting March 2016 to a HUD Section 8 Housing Project (600 families). There are no supermarkets in this part of the city so this new project, which is part of "Shaping Elizabeth" will improve food access to healthy foods for these low-income families. SNAP-Ed and RD have been doing nutrition classes at the Family Success Center next to the housing unit for these families. We partner and work together for the benefit of the folks in this city.

The scan also identified some early-adopting states with robust health and wellness programs. States such as Michigan and New Mexico have been implementing health promotion programs using a Bronfenbrenner (1979) socio-ecological theory model for at least a decade.

The following tables describe the characteristics of respondents, the reported evidence-based levels of programs, the scope of CDPM programming, and perceived barriers captured through online surveys completed between March 15 and May 15, 2016. Table 1 describes age, gender,

and role of respondents within Extension. Of the 152 total responses, 28 respondents (18%) completed the queries related to demographics and roles.

**Table 1. Extension Chronic Disease Prevention and Management Programs Environmental Scan Respondent Demographics and Occupational Roles (N = 28)**

<b>Age Ranges</b>	<b>Number</b>
18-29	4
30-49	11
50-64	12
65-75	1
<b>Gender</b>	
Female	26
Male	1
Unreported	1
<b>Occupational Role of Respondent</b>	
State Extension specialist	15
Field faculty/educator	13
<b>Geographic Responsibility</b>	
State	12
County cluster or region	1
County	12
Other	1
Unreported	2

Table 2 shows the number of CDPM programs reported and the evidence-based level of those CDPM programs as reported by survey respondents.

**Table 2. Evidence-Based Level of Cooperative Extension Chronic Disease Prevention and Management Programs**

	<b>Number</b>
<b>Total Number of Programs</b>	144
Incomplete program information provided	75
Complete program information provided	69
<b>Evidence-based Level of Reported Programs</b>	
Programs reporting strong evidence-base	31
Programs unsure of evidence-base	4
Programs with no evidence base	4
No response to evidence-base query	30

The current Extension CDDPM programs reported by respondents are listed alphabetically by title in Table 3.

**Table 3. Reported Cooperative Extension Chronic Disease Prevention and Management Programs by Title**

Program Title	Program Title
• Balanced Living with Diabetes	• Healthy Housing
• Banking on Strong Bones	• Hiking/trails active commuting and walkability
• Better Choices, Better Health	• I Can Prevent Diabetes
• Better Choices, Better Health (Steps to Health SNAP-Ed)	• I on Diabetes - spin off of Dining with Diabetes
• Book in a Bag-MyPlate	• Idaho Food Smart Families
• Cancer and Plant Foods	• Ideas for Cooking and Nutrition (ICAN)
• Cancer Clear and Simple	• Keys to Embracing Aging
• CDC Diabetes Prevention Program	• Let's Move! Child Care
• Choose Health: Food, Fitness, Fun	• Live Healthy Live Well email challenges
• Chronic Disease PATH	• Love Your Heart
• Chronic Disease Self-Management Program by Stanford University (Living Healthy)	• Mediterranean Cuisine Comes to You
• Cooking for a Lifetime of Cancer Prevention	MyCD
• DASH Diet	• Nourishing Boomers and Beyond
• DEEP Diabetes Empowerment Education Program	• On the Move to Better Health (Junior and Senior)
• Diabetes	• Pathweighs to Health
• Diabetes Chronic Disease Self-Management Program	• Power of Pink: Breast Cancer Awareness Education Program
• Diabetes Education	• Reducing Asthma Triggers in the Home
• Dining with Diabetes	• SNAP-Ed
• Dirty Hands, Healthy Hearts	• Speedway to Healthy Exhibit
• Eat Healthy, Be Active	• Stay Strong Stay Healthy- Elder
• Eat Smart, Live Strong	• Strong Women
• Eat Smart, Move More, Prevent Diabetes	• Strong Women, Healthy Hearts
• Eat Smart, Move More, Weigh Less	• Summer Walking Program
• EFNEP	• The Healthy Diabetes Plate
• Everybody Walk Across PA	• Walk Georgia
• Farm to School	• Walk Kansas
• Fit Families Rock	• Walk-a-weigh
• General Chronic Disease Self-Management	• Child Care Center Health
• Get Moving Kentucky	• Weight ~ The Reality Series
• GROW Healthy Kids & Communities	• Youth Choice Youth Voice
• Growing Stronger	



Table 4 shows the number of responses to each of the predefined perceived barriers to delivering CDPM Programs through Extension. Of the 152 survey respondents, 43 individuals answered this question.

**Table 4. Perceived Barriers to Delivering CDPM Programs within Cooperative Extension (N = 43)**

Perceived Barrier	Number of Responses
I do not have time.	8
I do not feel confident that I am knowledgeable about the subject.	6
Things keep changing and I can't keep up.	6
Individuals specifically reporting 'none.'	5
It is too complicated for people to understand.	3
Other organizations do this better than mine.	2
My organization does not include it as a priority area.	1
I do not feel that my clientele have any needs in this area.	0
Other	12

Survey participants acknowledged perceived barriers to delivering chronic disease prevention and management programs in the CES. These barriers included a lack of resources in the following areas: time, knowledge of general health promotion, specific disease management training, and general organizational support for wellness-based programs.

To deliver chronic disease prevention and management programs, respondents indicated that they needed appropriate curricula, training on use of evidence-based approaches, health program evaluation tools, and leadership support. Lack of time was the second most frequent barrier identified by environmental scan respondents, after the "Other" category. Within the twelve responses of the "Other" category, themes addressed were other job responsibilities, lack of time and resources, training and personnel, evaluation methods and community norms.

## Discussion

Professional development and a potential shift in leadership priorities may be needed to further advance the role of CES in health-related programming. Although the U.S. land-grant universities have the expertise, experience, and credibility to respond to this emerging need, barriers were identified regarding a lack of training and knowledge of general health promotion and specific disease management information. Because ECOP has made health and wellness a national priority through the engagement of both public and private partners, additional professional development to address barriers is justified. Extension supports a comprehensive

approach to preventing illness and disease through health and wellness promotion based on the expertise and credibility of educators.

This study is unique because of the nature of the CES where disciplinary experts at Land-grant Universities translate science-based research results for county-based educators to deliver to local citizens. Other organizations that develop and deliver health-related programs do not operate in the same manner (e.g., schools, health departments).

This study design attempted to reach Extension health promotion and chronic disease program managers and practitioners across the national Land-grant University system. The authors discovered that the environmental scan online survey methodology was limited in its ability to capture a broad cross-section of respondents across the Cooperative Extension System. Therefore, the uniqueness of this study limited the ability to compare results with other literature.

The CDPM Action Team will use the information obtained from the environmental scan to guide the development and enhancement of future professional development. There are opportunities for greater synergy between state public health departments, other higher education institutions, and Land-grant Universities. New partnerships must be explored to support the coordination and expansion of programming to address chronic disease prevention and management.

### **Implications for Practice**

Prevention and management of top chronic diseases is a national priority and has a well-documented research base. CES must seek out and use this existing research base to provide professional development opportunities for CES professionals and paraprofessionals working in the CDPM field.

Understanding of the relevance of health and wellness programs to improve individual and family life, along with adding new Extension personnel with specialized health and wellness responsibilities, could address perceived barriers with internal and external stakeholders.

The wide range of existing health-related programming indicates that CES is already well-positioned to work towards the improvement of overall health and wellness for the U.S. population.

Organizational support needs to come from CES leadership who identify health-related programming as a priority, which could result in more resources being allocated to these programs by Extension staff at all levels in the system.

Based on Cooperative Extension's National Framework for Health and Wellness, using the socio-ecological model, as well as the environmental scan results, we can now move forward using the fifth step of Albright's (2004) five-step process in completing the environmental scan: make informed decisions. By doing so, CES has the potential to increase the number of Americans who are healthy at every stage of life.

### Summary

A wide range of health-related programs were identified through the environmental scan survey, primarily addressing diet/nutrition, physical activity, housing, and gardening. Programs were reported to be delivered by CES in conjunction with a number of public and private partners.

Perceived barriers identified included lack of time, confidence in the subject area, lack of appropriate training, lack of specific wellness and disease knowledge, that the subject matter is too complicated for people to understand, that there are other organizations that do this type of programs better than their Extension organization, and the lack of organizational priority given to the subject matter of CDPM. The survey results showed that there are currently many existing community partnerships between CES and other community organizations and agencies addressing topics related to CDPM. These partnerships may indicate that more opportunities might exist for greater synergy with existing partners and through building new partnerships within the healthcare system to overcome some of the perceived barriers and increase capacity for successful CES community-based health and wellness programs.

The Cooperative Extension System chronic disease prevention and management programs could play a strong future role in health promotion using their existing model of community engagement and translational research. Consistent language defining CDPM programs throughout would help identify the CES as a public health partner.

The challenge will be to engage national and community leadership to collectively address the root causes of poor health. As stated in the Healthy People 2020 Framework, significant and dynamic inter-relationships exist among different levels of health determinants, interventions are most likely to be effective when they address determinates at all levels. A quote from a respondent sums it up as well:

Prevention requires education at levels and in sectors outside of the audience at risk for chronic disease and injury. Our organization (Extension) needs to rethink the role/responsibility, targets of Extension "education" and metrics/indicators for effectiveness of Extension efforts.

It will take courage and passion by each of us to contribute what we have, where we are, to create a better path to healthier, more productive lives for all of us.

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*Suzanne Prevedel*, MEdis an Assistant Extension Professor of Family & Consumer Sciences with Utah State University. Her focus areas are family wellness and chronic disease prevention in rural and Native American communities.

*Cindy Nelson*, MS, is an FCS/4-H Agent with Utah State University Extension. Her main programming areas are health and wellness and youth leadership.

*David Buys*, PhD, MSPH, CPH, is the State Health Specialist at the Mississippi State University Extension Service and Assistant Research and Extension Professor in the Department of Food Science, Nutrition, and Health Promotion.

*Linda Cronk*, MA, is an Extension Educator with Michigan State University Extension. Her specializations are Extension health research, disease prevention and management.

*Valerie B. Duffy*, PhD, RD, is a Professor and Director of the Graduate Program in Allied Health Sciences within the Department of Allied Health Science, College of Agriculture, Health, and Natural Resources at the University of Connecticut. Her areas of specialization are public health nutrition, dietary behaviors, obesity, and the psychobiology of eating.

*Julie Garden-Robinson*, PhD, is Professor and Extension Food and Nutrition Specialist at North Dakota State University. Her areas of specialization are nutrition and food safety.

*Marcel Horowitz*, MS, MCHES, Healthy Youth, Families, and Communities Advisor, University of California Cooperative Extension. She supports the UC Nutrition Education Program and the 4-H Youth Development Program in Yolo County, California. Her expertise lies in designing health promotion and youth development interventions that utilize novel approaches and experiential learning.

*Bernestine McGee*, PhD, RDN, LDN, is Professor and Program Leader, Human Nutrition and Food Program at Southern University and A&M College. Her specializations are Health Promotion, Disease Prevention, and Wellness.

*Marla Reicks*, PhD, RD, Professor and Extension Nutritionist, University of Minnesota, Department of Food Science and Nutrition. Her areas of specialization include nutrition education for dietary behavior change, and parenting practices to prevent childhood obesity.

*Dan Remley*, MSPH, PhD, is an Assistant Professor, and Field Specialist for Ohio State University Extension. His areas of specialization are food insecurity, diabetes education, and healthy food systems.

*Tamara C. Warren*, PhD, is a Health and Nutrition Specialist/PPT Coordinator with the Urban Affairs and New Nontraditional Programs at the Alabama Cooperative Extension System and Alabama A&M University.