

# Journal of Human Sciences and Extension

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Reports*

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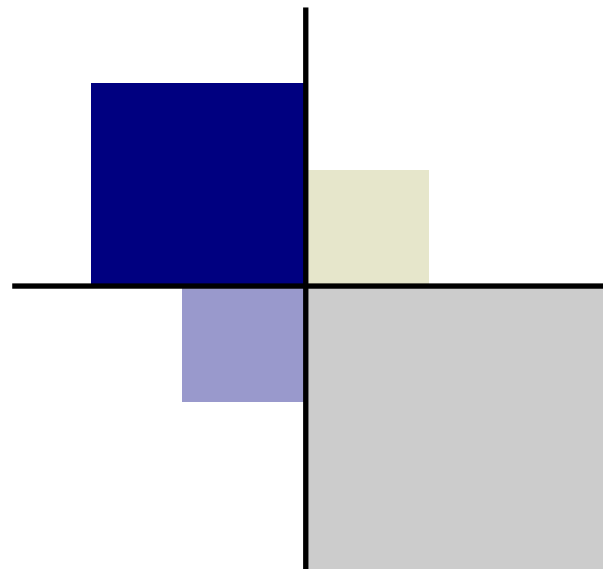
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# Journal of Human Sciences and Extension

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Special Issue:

The Cooperative Extension National Framework for Health  
and Wellness: Implementation and Scholarship Reports

David Buys and Sonja Koukel, Guest Editors

Donna J. Peterson and Rich Poling, Editors

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## Editors' Introduction to This Special Issue

In December 2012, the Extension Committee on Organization and Policy (ECOP) created a Health and Wellness Task Force charged with helping expand Cooperative Extension's work on health-related issues. In 2014, the Task Force presented a National Framework for Health and Wellness (Braun et al., 2014) that described national trends, a strategic analysis, priorities, outcome indicators, potential partners, and recommendations for moving Extension's work forward in this area.

Six program priorities were identified: 1) Chronic Disease Prevention and Management, 2) Health Insurance Literacy, 3) Health Literacy, 4) Health in All Policies Education, 5) Positive Youth Development for Health, and 6) Integrated Nutrition, Health, Environment, and Agricultural Systems (identified as a Board on Agriculture Assembly [BAA] and Board on Human Sciences [BoHS] effort). Action Teams were then formed in each of these priority areas.

This issue of the *Journal of Human Sciences and Extension* describes the initial work of the Task Force and then focuses on conclusions and implications from the ECOP-commissioned Health Implementation Action Teams. The purpose of this special issue is to feature the scholarship emanating from the Action Teams and to host that scholarship in one volume to showcase the depth and breadth of work accomplished by the teams. This work speaks to the future of Cooperative Extension. David Buys and Sonja Koukel served as Co-Editors for this special issue.

- In the first article, Bonnie Braun and Michelle Rodgers chronicle the process of moving from the Health and Wellness Task Force to Health Implementation Action Teams.
- The second article, by members of the Chronic Disease Prevention and Management Action Team, describes a survey of Extension administrators, faculty, and Extension agents/educators to determine their perceptions of the role of Extension in chronic disease prevention and management, both currently and into the next century of Extension.
- In the third article, members of the Chronic Disease Prevention and Management Action Team describe the process and results of an environmental scan to document health and wellness programming from Extension administrators, faculty, and Extension agents/educators engaged in chronic disease prevention and management-related programs and partnerships.
- The fourth article, by members of the Health in All Policies Action Team, presents recommendations for increasing Extension's engagement in Health in All Policies programming through an assessment of Extension Family and Consumer Sciences program leaders and state specialists.

- In the fifth article, Health Insurance Literacy Action Team members describe the development and testing of a national mobile messaging campaign designed to change health insurance knowledge, confidence, and behaviors of millennials.
- In the sixth article, members of the Health Literacy Action Team discuss Extension's role in health literacy and provide recommendations for incorporating health literacy into Extension programs and educational materials.
- The seventh article, by members of the Positive Youth Development for Health Action Team, presents results from an assessment of Extension professionals' readiness to integrate public health approaches with youth program efforts and provides examples and recommendations based on the transtheoretical model to enhance readiness.
- In the final article, Guest Editors David Buys and Sonja Koukel discuss the implications of the work of the teams and offer points for consideration about a way forward for Extension, especially as it pertains to promoting health and wellness.

Extension's history as a trusted resource for research-based educational programming and ECOP's support for work in health and wellness positions Extension to make a substantial contribution to the future health and well-being of its constituents. We hope that the information and ideas found in the articles of this special issue will provide *JHSE* readers with a better understanding of the work occurring in these areas of health and wellness education and will provide ideas that can be implemented to develop and expand efforts to improve the overall health and wellness of our communities.

Donna J. Peterson and Rich Poling, Co-Editors  
*Journal of Human Sciences and Extension*

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Braun, B., Bruns, K., Cronk, L., Kirk Fox, L., Koukel, S., Le Menestrel, S., . . . Warren, T. (2014). *Cooperative Extension's National Framework for Health and Wellness*. Retrieved from <https://nifa.usda.gov/resource/national-framework-health-and-wellness>

## **Health and Wellness: Leading Cooperative Extension from Concept to Action**

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*University of Delaware*

*This article describes the health and wellness journey of Cooperative Extension from a task force to action teams. It provides background on (a) Extension health and wellness programming, (b) establishment of the Extension Committee on Organization and Policy (ECOP) Health and Wellness Task Force, (c) acceptance of the Task Force Report, and (d) appointment of the ECOP Action Teams. The article explains the opportunity to align an Extension system around a health framework, as well as actions and vision for the new Culture of Health partnership with the Robert Wood Johnson Foundation. The article draws on articles published in the Journal of Extension, the 2014 ECOP Task Force Report, and documents about the Cooperative Extension–Robert Wood Johnson Foundation partnership. Authors supply first-hand observations and comments based on their roles in developing the Extension focus on health and wellness from concept to action. The article challenges Extension personnel and partners to advance programming to improve health and wellness of individual youth and adults; families; organizations, including Extension; and communities. Theoretical frameworks to use in programming; ideas for partnership development; and implications for research, education, and policy are included.*

**Keywords:** Cooperative Extension, Extension, Health and Wellness Framework, ECOP Action Teams

### **Introduction**

*Extension can do for the nation's health what it did for American agriculture.*  
(Braun et al., 2014)

The expressed vision of Cooperative Extension (Extension) achieving impact on the health of the U.S. population, equal to what they did for agriculture a century earlier, prompted a series of responses. Some of those responses are explained in this article. To begin the article, we have asked and answered two questions:

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### **What do you do when you've passed a milestone?**

*Ask, what's next! What's possible!*

### **What do you do when you've envisioned the possible?**

*Act on that vision!*

This article is a story of vision and action, context, concepts, and leadership that are together positioning the Cooperative Extension System (CES) to fulfill that vision. We are writing to provide a record of actions and accomplishments as an integrated approach to health and wellness emerged across CES. We are also writing to inspire you, the reader, to engage or enhance your engagement, in making the above vision happen.

As authors, we are in a unique position to provide background as we were both participants, observers, and sometimes leaders of deliberations and decisions that unfolded over a five-year period. We were engaged first-hand in efforts to move the vision of Extension health and wellness programming from concept to action. We are personally committed to joining with others to make possible a nation where a culture of health prevails.

### **Background**

To better appreciate the work of the Extension Committee on Organization and Policy (ECOP) Action Teams, and particularly the articles from those teams in this special issue of the journal, we offer background that led to the appointment of the teams. We also address the future of health and wellness programming as a springboard for application of findings from the articles.

### **ECOP Health and Wellness Task Force**

Prior to the milestone of celebrating Cooperative Extension's centennial in 2014, Extension leaders were talking about accomplishments of the first one hundred years and looking ahead to the next century. Daryl Buchholz, then Chair of ECOP, suggested that Extension might focus on the area of health and wellness as vital to the health and well-being of the nation. Many agreed that Extension could leverage its history of addressing nutrition to a broader definition of health to attract new and expanded partnerships and resources for the good of the population. Extension could also leverage its history of addressing the 4-H mission mandate area of the fourth H, Health.

In December of 2012, the ECOP Health and Wellness Task Force was appointed and given a year to fulfill the charge of identifying:

- (1) Priorities for Extension health programs for the next 3-5 years,



- (2) Outcome indicators for each priority, and
- (3) Potential partners, public and private, including nontraditional partners, to be engaged in resource development, program implementation, and outcomes reporting.

### **Health and Wellness Task Force Report**

Within the allotted year, the Health and Wellness Task Force identified and studied seven national trends that became the basis for setting priorities (Rodgers & Braun, 2015):

- Public health policy shifts,
- Health conditions,
- Health disparities,
- Economic conditions,
- Population changes,
- Technology, and
- Health literacy.

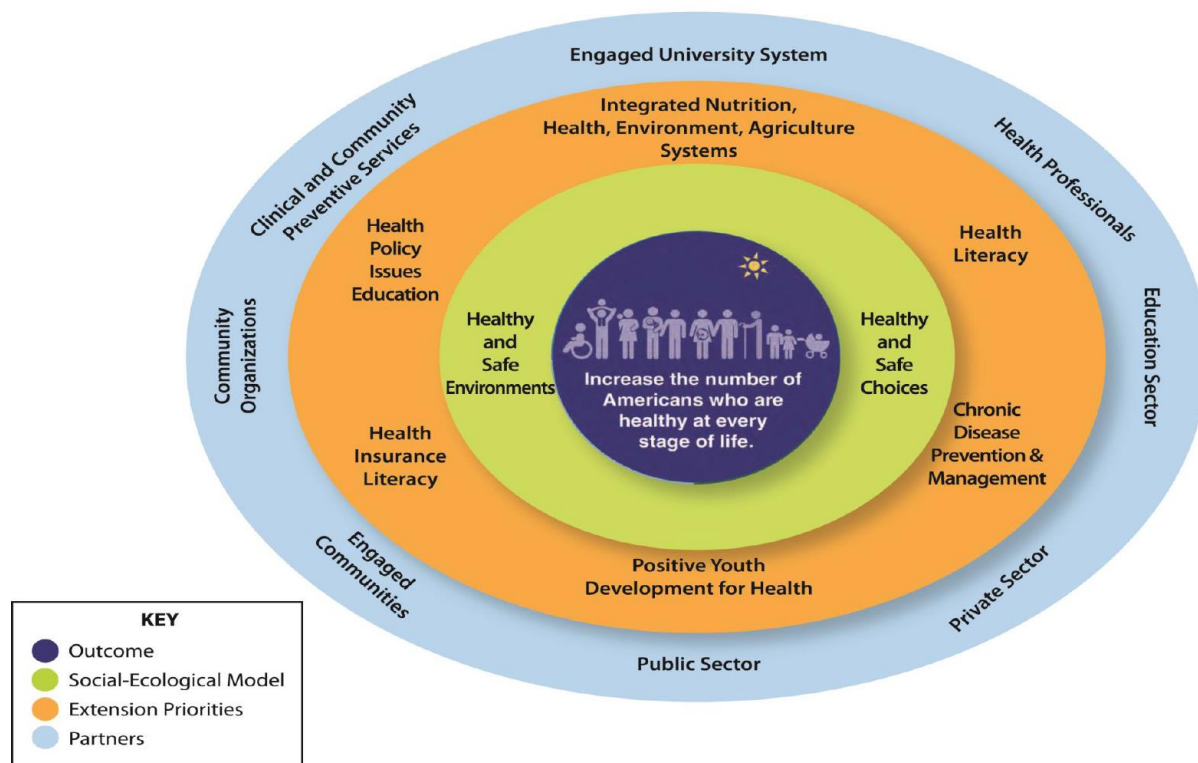
The Task Force also completed a strategic analysis of strengths and weaknesses of Extension, with an emphasis on health programming, and identified six priorities (Rodgers & Braun, 2015). The six recommended priorities were:

- Chronic Disease Prevention and Management,
- Health Policies Issues Education [name changed to Health in All Policies Education],
- Health Literacy,
- Health Insurance Literacy,
- Positive Youth Development, and
- Integrated Nutrition, Health, Environment, Agriculture Systems.

The Task Force studied the National Prevention Council's report (2011) and action plan (2012) (located at <https://www.surgeongeneral.gov/priorities/prevention/strategy/index.html> and at: <https://www.surgeongeneral.gov/priorities/prevention/2012-npc-action-plan.pdf>, respectively). Based on those documents, the Task Force determined that the network and expertise of CES could be leveraged to contribute toward reaching the nation's goal – to increase the number of Americans who are healthy at every stage of life. Adopting this goal for the CES health and wellness framework was deemed strategic as it brought alignment between Extension and national policy (Rodgers & Braun, 2015).

To present the framework to Extension, the Task Force decided that a socio-ecological theoretical framework was needed to visualize the priorities in relation to an intended outcome. The final visualization of the framework is shown as Figure 1.

**Figure 1. Cooperative Extension's National Framework for Health and Wellness**



(Source: Braun et al., 2014)

The ECOP Health and Wellness Task Force report, *Cooperative Extension's Health and Wellness Framework* (Braun et al., 2014), available at [www.aplu.org/document.doc?id=5134](http://www.aplu.org/document.doc?id=5134), contained the assessment of national trends, the strategic analysis, and priorities as well as outcome indicators, potential partners, and recommendations. The report included this important statement:

This year, 2014, marks the 100th anniversary of the signing of the Smith-Lever Act which created the Nation's Cooperative Extension System. This "Extension" model arose at a time when American agriculture was largely inefficient and only marginally productive. The consequences of the agricultural practices of the time were endangering our Nation's economic, environmental, and personal health. A century later, American agriculture is without equal in its contributing food to a growing world population. We, and others, believe that this same system of Extension can do for the nation's health what it did for American agriculture (Braun et al., 2014).

### **Response to Health and Wellness Task Force Report**

ECOP approved the Task Force report in the summer of 2014. The report was endorsed by the Experiment Station Committee on Organization and Policy (ESCOP), the Board on Agriculture

Assembly (BAA), and the Board on Human Sciences (BOHS) of the Association of Public Land-grant Universities. A collaborative implementation process between ECOP and ESCOP resulted in appointment of a Health Implementation Team consisting of five action teams charged with addressing five of the six priorities (Health Literacy, Chronic Disease Prevention and Management, Positive Youth Development, Health Insurance Literacy, and Health in All Policies Education).

The remaining priority, Integrated Nutrition, Health, Environment, Agriculture Systems, became the responsibility of a steering committee appointed by BAA and BOHS. The steering committee was charged with developing an academic and research initiative complimenting the endorsed Extension programmatic initiative. The committee focused on integrating nutrition, health, environment, and agricultural systems. The committee's report, *Healthy Food Systems, Healthy People (HFSHP)* (Association of Public and Land-grant Universities, 2016), is available at <http://www.aplu.org/library/healthy-food-systems-healthy-people/file>. The HFSHP report is providing the framework for facilitating public-private partnerships and new federal policy proposals to support HFSHP goals. In particular, the framework is intended to secure potential federal funding in existing National Institutes of Health, National Science Foundation, Centers for Disease Control and Prevention, and U.S. Department of Agriculture agencies through future Farm Bills and additional capacity funds.

### **Health Implementation Action Teams**

The five Action Team chairs and two ECOP representatives, with assistance from the ECOP and ESCOP Executive Directors, began the work of converting the Health and Wellness Task Force report into action.

The five Action Teams were charged with the following responsibilities and given until late 2017 to complete them:

- Invite additional internal and external partners as needed for maximum effectiveness,
- Identify and develop systematic programs and curriculum,
- Engage colleagues in professional development,
- Provide assistance with resource development, and
- Develop and launch system-wide program impact evaluation.

The teams met at National Health Outreach Conferences (NHOC), at other conferences, and via distance technology to fulfill their charge. Yearly reports were made to ECOP and ESCOP. A final report, *Extension Committee on Organization and Policy and Experimentation Station Committee on Organization and Policy Health Implementation Final Report (ECOP & ESCOP, 2017)*, was submitted in the fall of 2017. This document is available at [http://bit.ly/CES\\_Health](http://bit.ly/CES_Health).

## Action Team Accomplishments

In May of 2017, prior to the National Health Outreach Conference, Action Team members gathered in Annapolis, Maryland, to report on accomplishments, reflect on innovation, and suggest professional development as the Culture of Health Partnership Initiative between CES and the Robert Wood Johnson Foundation (RWJF) was launched. Proposed professional development topics are listed in Core Competencies Facilitated Session Notes (Ruble, 2017) available at [http://bit.ly/2017Health\\_Core\\_Competencies](http://bit.ly/2017Health_Core_Competencies).

Teams reported these highlighted accomplishments:

- Conducted five assessments and/or reviews of curriculum,
- Created one on-line course with another course in the making,
- Expanded partnerships,
- Used multiple electronic channels to communicate and disseminate products, and
- Demonstrated scholarship of dissemination with 36 presentations, two journal articles pending, six articles in this issue of the Journal of Human Sciences and Extension, and one policy brief.

Teams also identified potential professional development to advance health and wellness programming throughout Extension. During the 2017 NHOC preconference, Action Teams identified content and professional development they thought Extension personnel would need to address the following six dimensions of creating a culture of health:

- Applied research,
- Theoretical framework,
- Collaboration,
- Diversity & inclusion – equity,
- Working with adults (andragogy), and
- Working with youths (pedagogy).

Action Team participants were challenged to collectively identify concepts that should be taught as part of a foundational introduction to health and wellness from a public health perspective. They identified topics ranging from specific health information to systems change (Ruble, 2017). A complete listing is available at [http://bit.ly/2017Health\\_Core\\_Competencies](http://bit.ly/2017Health_Core_Competencies). Examples include:

- Social determinants of health,
- Relationships/dimensions of health and wellness,
- Population demographics and economic health,

- Career path for youth in health, and
- Principles of system evaluation.

Participants were also asked to reflect on what they had learned as a result of serving on the action teams. They identified lessons that could be applied as the CES moves ahead in health and wellness programming. A few of these lessons are listed below.

Be willing to:

- Challenge status quo,
- Start something without the end in mind,
- Create the future, and
- Be okay with a certain level of uncertainty.

The Action Team members acknowledged that innovation takes time and that sometimes Extension professionals will need to take a step before knowing what the next step will be. Participants were recognized for being pioneers in advancing CES health and wellness programming. As co-author Michelle Rodgers said at this meeting, “It is the first time that the system as a whole, Research and Extension, has undertaken an initiative of this scope. It was innovative just in the doing.”

### **Advancing Health and Wellness through a Strategic Partnership**

As the Health Implementation Action Teams were forming, efforts to identify other partners and funding began. This focus was in keeping with the CES Health and Wellness Framework recommendations. ECOP decided upon a two-pronged approach related to system funding in the area of health: (1) exploring structure and framework for private resource mobilization across the Cooperative Extension System and (2) informing the structure and framework experientially through a partnership with private funding. As the National 4-H Council was already exploring funding for youth health programming, National 4-H Council volunteered to explore private funding options for Extension, including adult efforts around health.

After several months of exploration and relationship building by National 4-H Council, Extension had an opportunity to develop a proposal around the initiative area of childhood obesity to be explored in partnership with the RWJF. Representatives of CES, BOHS, and the USDA National Institute of Food and Agriculture, including youth and adults with an interest and stake in health and wellness, were appointed to the National Leadership Advisory Team (NLAT), and a project manager was hired. The NLAT began conversations with the RWJF and among team members regarding the partnership to further address the obesity issue as a way to implement the CES Health and Wellness Framework.

After several months of conversation, Extension and National 4-H Council were invited to the RWJF annual advance session for partners. The RWJF Culture of Health Framework and proposed changes by the RWJF to focus on several new partners and systems were presented at that meeting. This event was pivotal as the RWJF plan aligned with the Cooperative Extension National Framework for Health and Wellness, and most particularly, on the socio-ecological framework and on pulling together systems and new partners. Within six weeks, a get-acquainted session was held between NLAT and key decision makers at the RWJF. Following that meeting, a decision by the RWJF was made to pivot our partnership from the childhood obesity area to focus on the culture of health. A second planning grant proposal was created and approved by the RWJF for CES to officially engage in identifying how Extension could partner with the RWJF to build a culture of health in communities.

With the planning grant funds from the RWJF and the support of ECOP, a somewhat revamped and renamed group accepted the responsibility of creating a multistate, 10-year project to test the capabilities of CES to guide communities toward creating a culture of health. The Core Leadership Team (CLT) conceptualized a 10-year, scaled-up culture of health initiative. The concept was converted into a funded proposal for a two-year partnership launch initiative. Key elements of the Extension organization that would be brought to bear on the culture of health initiative were the use of research-based information, the incorporation of positive adult/youth relationships in communities, and the strong volunteer base of Extension.

The initiative was designed to test two logic models, the Community Engagement Logic Model and the CES Innovation Logic Model. These logic models serve to guide the implementation of the initiative, assess the process, and determine the extent to which the outcomes were achieved. Continual process evaluation was built into the proposal with the intent of submitting another proposal.

To test both how the CES can add value to existing community health endeavors and how CES can work with communities to initiate efforts to create a culture of health, the initiative required that work be done in three types of communities, with at least one in a rural area. A description of actions expected of each type of community was created as a basis for identifying the three types of communities: (1) Planners—communities where CES will start a process, (2) Implementers—communities that have started but are not yet addressing all of the CES–RWJF requirements, and (3) Innovators—communities that are innovating and could benefit by adopting the CES–RWJF requirements. Each type of community engagement will answer questions about what it takes to move toward an inclusive culture of health.

In the summer of 2017, the RWJF announced a \$4.6 million 2-year investment in a partnership with Extension to launch the culture of health plan as a proof-of-concept initiative. An application process was designed to identify land-grant universities who met the requirements for

testing this innovative partnership and community engagement initiative. Applicants were required to address 10 strategic dimensions of the CES-Readiness Screening Assessment Tool (CES-RSAT). Those dimensions, weighted to demonstrate importance to the partnership, were:

- (1) Youth Volunteers,
- (2) Adult Volunteers,
- (3) Applied Research,
- (4) Collaboration,
- (5) Leadership,
- (6) Resources,
- (7) Diversity and Inclusion,
- (8) Theoretical Base,
- (9) Evaluation, and
- (10) Innovation.

Applications were reviewed by a panel of Kellogg Leadership Fellows. Out of 23 complete applications, five were selected as funded pilot institutions: University of Minnesota, South Dakota State University, Utah State University, University of Tennessee, and University of Maryland Eastern Shore. Institutions willing to self-fund were invited to become part of the pilot test to be conducted during 2017-2019. Ten additional institutions agreed to self-fund and join the pilot states. A convening of representatives from the pilot testing institutions was held in December of 2017.

Innovation is the guiding concept behind the initiative. Innovation is evident as CES is now partnered with the RWJF. Innovation is infused in the initiative as CES focuses its expertise on engaging youth and adults as leaders in working with communities to identify and take actions that could logically result in a culture of health. Innovation is built into the scaling-up plan to go from 15 initial communities to 1,000 communities in ten years.

### **Challenge to Advance Health and Wellness Programming**

As we have learned over the past five years, the efforts of the Action Teams and the CES–RWJF partnership are only parts of the work being done to advance programming in health and wellness. A quick review of the Journal of Extension will reveal articles about the scholarship of applied research and teaching underway in multiple states. A review of Extension websites will also reveal efforts to focus programming on health and wellness, including the hiring of personnel with expertise and appointments focused on those topics. Reading the articles in this Journal of Human Sciences and Extension will provide ideas for programming and/or research that can be applied.

The ECOP Health and Wellness Task Force recommended that the former Priester Conference be retitled the National Health Outreach Conference. Each year since the change was made, attendance has become more diversified, and efforts have been made to attract external partners. Attendees and presentations are increasingly representative of multiple disciplines and program areas within Extension. The proportion of non-Extension attendees has risen. Scholarly exchanges and networking are opening opportunities for health and wellness programming.

If the vision for CES is to actually achieve in the area of health what we have achieved in agriculture, then we need to see an increase in applied research and evaluation that will provide the basis for programming and evidence of impact. We will need to see CES increasingly practice multidisciplinary, integrative, and collaborative approaches to issues of health and wellness and to balance both a focus on healthy and safe choices and healthy and safe environments that form the first concentric circle of the CES Health and Wellness Framework. We will also need to continue to expand our partnerships as illustrated in the Framework's outside circle.

CES will be well-served to test existing theoretical frameworks as we implement community engagement approaches. Theoretical frameworks such as Social Cognitive; Planned Health Behavior; and Stages of Change or Readiness of Changes; combined with youth and adult partnerships, community leadership, and empowerment, could help Extension reach intended outcomes and add to the body of knowledge about community engagement and other types of health and wellness programming.

### **Implications for Action**

This article began with two questions:

- (1) What do you do when you've passed a milestone?
- (2) What do you do when you've envisioned the possible?

The body of the article explained some of what the collective "you" in Cooperative Extension have done. Based on what we have described in this article, a slightly reworded question is worth pondering:

What can you do as you personally envision the possible in health and wellness?

Some of you have strengths in innovation. You can help lead the strategies and Extension System with new processes and approaches to engage communities in building a culture of health.



Many of you are coming to recognize the value of the socio-ecological model as critical to all areas of Extension. You can provide professional development and model by example how to engage in policy, system, and environmental work, along with educational efforts focused on the individual.

Some of you are skilled at discovering knowledge. You can use your research skills to ask and explore researchable questions and to evaluate programming.

Others are skilled at educating individuals and groups. You can provide professional development and guide both youth and adults to engage in and lead community health initiatives.

Some of you have skills in the policy arena. You can focus on the concept of “health in all policies” advanced by one of the action teams and help inform local health coalitions of policies that work.

Others have skills in developing partnerships and/or seeking funding. You can apply those skills to bring new partners to the coalitions and further inform and advance the Extension Health and Wellness Framework.

Some of you have skills in community engagement. You can join in the work of engaging communities in creating a culture of health based on the Robert Wood Johnson Foundation Culture of Health Framework. Each of you can find your niche and take action.

All of you can read the articles in this journal from the Action Teams for ideas and application to your programming or further research. Individually and collectively, you can lead health and wellness programming from concept to action.

What will you do?

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The authors acknowledge the leadership of the Extension Committee on Organization and Policy; members of the ECOP/ESCOP Health and Wellness Task Force; Health Implementation Action Teams; the Board of Agriculture Assembly and Board on Human Sciences Healthy Food Systems, Healthy People Steering Committee; CES–RWJF National Advisory Leadership Teams; USDA National Institute for Food and Agriculture; and National 4-H Council. Together, they and other Extension individuals and teams, made possible the vision and actions that are leading health and wellness innovation across Cooperative Extension. We also want to acknowledge the Robert Wood Johnson Foundation whose staff took time to learn about Cooperative Extension, asked insightful questions, and participated in two National Health Outreach Conferences.

# **The Role of Cooperative Extension in Chronic Disease Prevention and Management: Perspectives from Professionals in the Field**

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*Chronic diseases are strongly associated with premature death and increased health care costs. Nearly half of American adults report they have one or more chronic health conditions. Cooperative Extension is calling for refocus to refine and align with broader efforts to promote public health by supporting the prevention and management of chronic disease. The success of this refocus is dependent on a shared vision between funding agencies, stakeholders, and Extension. As part of developing this shared vision, the Chronic Disease Health Implementation Team surveyed 152 Extension administrators, faculty, and Extension Agents/Educators to determine their perception of the role of Extension in chronic disease prevention and management in the next century. Respondents answered the open-ended question, "What role should Cooperative Extension have in working to reduce chronic diseases in America for the next 10, 25, and 100 years?" Analysis with grounded theory identified three themes. The respondents perceived the role of Extension professionals as educators and collaborators in chronic disease prevention and management who focus on influencing individuals and environments. As educators, Extension should deliver evidence-based programs to communicate, inform, facilitate, and teach. As collaborators, Extension should facilitate and nurture partnerships to effect changes in chronic disease prevention and management at individual, family, and community levels.*

**Keywords:** chronic disease prevention and management, Cooperative Extension, Extension, public health, family and consumer sciences, socio-ecological theory, Health and Wellness Framework, Extension Committee for Organization and Policy, ECOP Action Teams, nutrition

### **Background**

Chronic diseases are strongly associated with premature death, increased health care costs, and lost productivity (Centers for Disease Control and Prevention, 2017). As of 2012, about half of all adults—117 million people—had one or more chronic health conditions and one in four adults had two or more chronic health conditions (Ward, Schiller, & Goodman, 2014). Eighty-six percent of the nation's \$2.7 trillion annual health care expenditures are for people with chronic and mental health conditions (Gerteis et al., 2014). The goals of chronic disease prevention and management are to prevent disease occurrence, delay the onset of disease and disability, lessen the severity of disease, and improve the health-related quality and duration of an individual's life (Doll, 1985). Prevention efforts traditionally involve interventions performed before the clinical onset of disease or early in the course of disease, while management efforts may occur later in the disease course and are often focused on reducing the undesired consequences of diseases (McKenna & Collins, 2010). The U.S. Department of Health and

Human Services published Healthy People 2020 that focuses on reducing preventable death and injury and includes ambitious, quantifiable objectives to achieve national health promotion and disease prevention goals for the United States within a 10-year period (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, 2010).

Successful community prevention efforts have been guided by ecological models (e.g., Bronfenbrenner, 1979), which recognizes the multifaceted influences on behaviors associated with chronic disease. For interventions to be relevant, socio-ecological theory suggests targeting not only individuals, but their socio-environmental “upstream” influences, including social networks, organizations, communities, and policies. Cooperative Extension (Extension) believes that its focus of addressing health should be refined and better aligned with these broader efforts to promote public health, prevent and manage chronic disease (Braun et al., 2014). The local presence of Extension in states and counties throughout the nation position it to play an important role in efforts to address chronic disease prevention and management.

### ***The Cooperative Extension National Framework for Health and Wellness***

In 2014, the Extension Committee on Organization and Policy (ECOP) released Cooperative Extension’s National Framework for Health and Wellness (Braun et al., 2014) based on the socio-ecological model (Bronfenbrenner, 1979), which described the priority areas for Extension in health promotion. The framework represents the relationships among individual, community, and societal factors that influence individuals’ attitudes, beliefs, behaviors, and choices within the context of where they live and work, as well as the social and cultural norms such as economics, educational and social policies, and inequalities. With this backdrop, the overall goal of the Health and Wellness Framework is to increase the number of Americans healthy at every stage of life. Aligning with the socio-ecological model, Extension should work in the domains of health literacy, health insurance literacy, positive youth development for health, chronic disease prevention and management, and health policy issues education to ultimately create healthy and safe environments and promote healthy and safe choices. In doing this, the Framework for Health and Wellness suggests that “Extension can do for the nation’s health what it did for American agriculture” (Braun et al., 2014, p. 2).

### **Purpose**

To further refine the role of Extension in addressing health and wellness, ECOP commissioned Health Action Teams around the five domains of health literacy, health insurance literacy, positive youth development for health, chronic disease prevention and management, and health policy issues education. Each team was charged with assessing and evaluating how Extension should and can be at work to improve the health of Americans in these domains. The purpose of

this report is to describe the work on the domain of Chronic Disease Prevention and Management (CDPM) Action Team.

The success of Extension in health promotion and, specifically, chronic disease prevention and management is dependent on a shared vision among funding agencies and other stakeholders, Extension administrators, specialists, faculty, agents, educators, and clients. We sought to describe one aspect of that shared vision and report on how Extension specialists, faculty, and agents/educators perceive the role of Extension in CDPM in the next century.

### **Methods**

The qualitative data presented in this paper are drawn from an environmental scan conducted by the ECOP's CDPM Action Team in 2016. Extension administrators, faculty, and agents/educators were recruited to provide feedback on CDPM-related curricula, projects, programs, partnerships, and barriers to action. The purpose of the environmental scan was to identify information needs, seek that information, and implement it (Choo, 2001).

The 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. A snowball sampling strategy was used to distribute electronic surveys nationally to Extension Educators who had a Family and Consumer Sciences or Health Sciences focus. Surveys were initially distributed to state Extension program leaders who then distributed them within their states. Online survey responses were obtained from 152 Family and Consumer Science/Health Sciences Extension professionals throughout the United States, providing information about 71 programs in 17 states. Twenty-eight individuals completed the personal information question which was at the end of the survey. Of those 28 who provided responses to the personal information questions, most were female (93%), between the ages of 30-64 (82%), split between specialists (54%) and agents/educators (46%), and represented county (50%) and statewide/regional positions (50%).

In the environmental scan, respondents were asked to provide information about current Extension programs within their states that focused on preventing or managing chronic disease(s). In addition, respondents were asked the open-ended question, "What role should Cooperative Extension have in working to reduce chronic diseases in America for the next 10, 25, and 100 years?" One hundred-one (66.4%) individuals responded to this question about Extension's future.

## Analysis

Qualitative methods allow for a naturalistic approach to the research subject, situating the researcher inside the world of the research participant (Denzin & Lincoln, 2011). By using qualitative methods, the research team was able to focus closely on the research participants' point of view and their construction of the future role of Extension in chronic disease prevention and management. Qualitative methods allow for greater understanding of phenomena in context but are not necessarily meant to be generalizable to populations (Denzin & Lincoln, 2011).

Using grounded theory, two research assistants coded and analyzed the data through memo writing and initial, focused, and selective coding phases (Charmaz, 2006; Corbin & Strauss, 1990; Flick, 2014). Coders used MAXQDA 12 software for coding. Grounded theory provides procedures and canons for qualitative researchers to understand phenomena and minimize bias (Corbin & Strauss, 1990). An iterative process was used to categorize individual responses into themes and subthemes. Each research assistant separately read the responses and identified a set of overall themes and subthemes. The research assistants then convened to agree upon a common set of themes and subthemes. The responses again were re-read separately by the researchers and categorized into the agreed-upon themes and subthemes. Finally, the two research assistants reconvened to build consensus on where responses were categorized. If the research assistants could not come to an agreement upon the theme to which a response belonged, a third research assistant would break the tie.

## Results

The following themes emerged from the coding and analysis processes: (1) the traditional Extension role, (2) focus on “systems,” and (3) leveraging the assets of the Land-grant System.

## Themes

**Theme 1: The traditional Extension role.** The first theme that emerged was that the role of Cooperative Extension in addressing CDPM should be the traditional role of local, interpersonal education and collaboration. As educators/agents, Extension should deliver evidence- or research-based programs in order to communicate, inform, facilitate, and teach about CDPM.

An exemplar quote from a respondent was:

I think that Extension should have the same role it has always had – educating citizens about living healthy lives. We do this through involvement in research, utilizing evidence-based curriculum, being embedded in communities, identifying needs, building partnerships, and fostering relationships.

Additionally, as collaborators, Extension should encourage and develop community partnerships to address CDDP and to effect changes at the individual, family, and community levels. This will involve connecting with content experts who may be embedded in the healthcare system. Another role will be to link healthcare providers to other social service providers to better address the social determinants of health. One respondent said, “Extension should play a lead role with other public health and prevention health stakeholders. This work must be collaborative to have the reach and impact that is needed.”

Another response was:

I think Cooperative Extension should continue working in collaborative relationships with various agencies to promote health and wellness and to continue to encourage healthful living. Helping others by teaching about nutritious food, healthful ways of food preparation, and the importance of physical exercise is going to continue to be needed far into the future.

Other terms used by respondents that described Extension’s role included:

- Educator: programs, communicate, inform, facilitate, and teaching.
- Collaborator: partner, partnership, link, contributing, participate, bridge, and foster.

**Theme 2: Focus on “systems.”** A systems focus might involve partnering with or providing education to organizations that can influence socio-ecological determinants of health. Examples of these activities might include educating food service directors about smarter lunchroom concepts, coaching food pantry directors to offer healthier selections, promoting walking programs within workplaces, or partnering with city planners on coalitions to improve transportation options to grocery stores.

Quotes from respondents that were representative of this theme included:

I believe Cooperative Extension should be at the forefront of this issue. We should be taking steps to offer chronic disease prevention classes and screening alongside our health departments, partnering with them to extend each other's reach, and building off each other. We should be working with hospitals and doctor’s offices to place ourselves where our sick are, and we should be in the workplace where our healthy are to maintain that health. We should have our boots on the ground while we have our voices to the ears of policy makers.



and

Clearly focused on prevention, so the focus is on changing health behaviors that will reduce one's risk for the chronic diseases or the effects of the chronic disease. Some of this work could be direct education or work within communities to address their environments and policies that impact chronic disease risk. It could also include work with organizations to help them put in place key changes that will help members/employees of that organization to address factors to reduce their chronic disease risk.

**Theme 3: Leveraging the assets of the Land-grant System.** Extension has a widespread footprint, the ability to reach the underserved, and public trust. In the age of the internet, individuals can access information in an instant. Likewise, anyone can post information that may or may not be evidence-based. Extension can serve as a filter for evidence-based information related to CDPM relevant for each individual's situation.

A quote from a respondent that is representative of theme three was:

Cooperative Extension (CE) has a significant role in chronic disease prevention through educating and connecting Americans to the resources they need to manage their own health. As a trusted source of information, CE can translate the science into understandable information that is helpful as consumers take responsibility for their own health. Likewise, CE can have a significant impact on public health by providing educational resources and programs focused on prevention throughout all stages of life.

Additionally, other respondents perceived that Extension brings assets that are unique to Land-grant institutions. Extension's role in CDPM might include the participation in and interpretation of clinical and field scientific research. Some suggested that Extension is well positioned to address food and health systems, especially with its connection to policymakers, health, and agriculture. Extension also has connection to faculty and staff with expertise in food nutrition and exercise.

Perhaps the best overall summary quote from a respondent was:

Cooperative Extension should play an increasingly significant role in chronic disease prevention and management as health educators and agents of change. We have a long history of providing direct education, and we can and should continue to do that well. We should also move toward delivery of programs that empower clients to be agents of change on matters related to policy, systems, and environments. We are the most qualified and well-prepared agency of all in our states to provide research-based

education and programming to effect change on health-related outcomes. We must continue to work with researchers to be the preferred partners in translating impactful research.

### **Discussion**

As reflected in analysis of the responses with grounded theory, respondents felt that Extension is well positioned to address chronic disease because of its presence and trust in local communities throughout the nation. Extension educators are seen as skilled educators, facilitators, and collaborators, and therefore can bring together coalitions, provide trainings to organizations, and implement education programs in order to influence socio-ecological determinants of health. Perhaps though, especially in urban centers, Extension is one among many potential providers of health-related information and education and should have a shared vision and understanding of its unique role in addressing chronic disease prevention and management.

Traditionally, as reported by respondents, Extension has a strong history of providing evidence-based programs to individuals. As also suggested by respondents, Extension should be focusing on a systems approach to support individual (behavior) change in conjunction with environmental change to encourage healthy behaviors. This idea aligns with socio-ecological theory that postulates that behaviors are influenced by interpersonal, intrapersonal, organizational, communal, and policy factors. Socio-ecological theory also suggests that these influences are bidirectional. Individuals influence social networks, organizations, communities, and ultimately policies; the influence may also flow the other direction. In both cases, the relationships can be health promoting. Whereas public health work is currently adopting a trickle-down approach of working to influence policy, community, and organizations to impact health behaviors, Extension may be positioned to influence change from the bottom up. As suggested in the best summary quote shown earlier, Extension can “empower clients to be agents of change on matters related to policies, systems, and environments.” Empowering clients to be agents of change could be accomplished within traditional Extension programs and added to curricula. Evaluations might capture evidence of change, such as a nutrition class participant asking a corner store owner to carry more produce, a person with diabetes asking a restaurant to provide nutrition information, a citizen going to a school board to advocate for farm-to-school, or a client at a food pantry talking to a volunteer about his or her preferences and needs.

Equipped with assets, partnerships, community reach, and trust, Extension professionals are poised to take greater roles in universities, government, or communities toward health promotion efforts. The visioning effort described in this report illuminated the need to market the skills and assets of Extension professionals as collaborators for change with leaders of public health (e.g., Centers for Disease Control and Prevention), hospital organizations, and other entities at the state and national level so that its vision and niche are understood.

Extension professionals working in the area of Family and Consumers Sciences or Health Sciences should articulate a shared long-range outcome toward chronic disease prevention and management. Having a sense of what current Extension professionals see as strengths can help leaders align these perceived strengths with where they want to guide Extension. By its nature though, Extension is decentralized and is often not guided by national priorities. Although local trust and relevance are viewed as strengths, establishing a national shared vision will help Extension be successful in more competitive environments for public resources and grants. This vision will help to ensure continued growth and progress for the next 100 years.

### Summary

This paper describes the responses of Extension professionals to an open-ended question about the future role of the Cooperative Extension Service in chronic disease prevention and management. Although our sample might not have been representative of Extension professionals, the research intention was to qualitatively describe shared perspectives. More work will be needed to understand and communicate a shared vision. Dialogue and engagement with other program areas such as community development, agriculture and natural resources, and youth development will further build on this work and align with Extension's Health and Wellness Framework.

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## **Cooperative Extension as a Partner in Creating Healthy Communities: An Environmental Scan**

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*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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*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 CDPM 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)**

<b>Perceived Barrier</b>	<b>Number of Responses</b>
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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## **Health in All Policies: Working Across Sectors in Cooperative Extension to Promote Health for All**

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*A Health in All Policies approach engages cross-sector stakeholders to collaboratively improve systems that drive population health. We, the members of the Extension Committee on Organization and Policy (ECOP)'s Health in All Policies Action Team, propose that adopting a Health in All Policies approach within the national Cooperative Extension System will better prepare us to contribute meaningfully to improving the nation's health. We first explain the Health in All Policies approach and argue for why and how it is relevant for Extension. We then present insights gathered from Extension Family and Consumer Sciences program leaders and state specialists to assess whether national and state leadership are poised to adopt a Health in All Policies approach within their affiliated programs. Although participant leaders saw the value of the approach in contributing to population health improvement, they generally saw the Extension system as having lower levels of readiness to adopt such an approach. Six themes emerged as ways to increase Extension's engagement in Health in All Policies: a paradigm shift within Extension, professional development of competencies, transformational leaders and leadership support, continued and new partnerships, information access for all levels and disciplines of Extension, and developing familiarity with the use of a health equity lens. We provide examples of some areas where Extension is already engaged in this work and make suggestions for next steps.*

**Keywords:** Cooperative Extension, Extension, Health in All Policies, health equity, cross-sector collaboration, Health and Wellness Framework, ECOP Action Teams

## **Introduction**

Health in All Policies is a “collaborative approach to improving the health of all people by incorporating health, equity, and sustainability considerations into decision-making across sectors and policy areas” (Rudolph, Caplan, Mitchell, Ben-Moshe, & Dillon, 2013). National and international public health organizations, such as the American Public Health Association (APHA, 2017), Centers for Disease Control and Prevention (CDC, 2016), and World Health Organization (WHO, 2017), regard Health in All Policies as a best practice for improving population health outcomes, and it has been adopted broadly (Rudolph et al., 2013).

The Health in All Policies Action Team was formed in 2015 as one of five Extension Committee on Organization and Policy (ECOP) Action Teams established to support a health implementation process for Cooperative Extension (Extension). The charge for the Health in All Policies Action Team arose from ECOP recognition that:

improving population health will require collective resolve and action to address the social, economic, and environmental determinants of health. For Extension, it will also mean working in new ways to inform decisions about policy. It means working at the outer rings of a socio-ecological model, shaping the context in which people grow, learn, work, and play. Through health policy issues education, we inform and assist individuals and groups as they struggle to make decisions about the health issues that affect them and their communities. (ECOP, 2015, p. 2)

We identified the Health in All Policies approach as a potential framework to fulfill that charge. Through this paper, we intend to substantiate our recommendation that the national Cooperative Extension System should adopt a Health in All Policies approach, with delivery locally through state Extension programs, to better prepare Extension to contribute meaningfully to improving the nation's health.

Certain Extension program areas are traditionally aligned with health, such as Family and Consumer Sciences and 4-H Healthy Living. However, other program areas, such as Agriculture and Natural Resources, also have substantial health impacts. Increasing agricultural yield, for example, may have implications for farmworker health and safety, including occupational injuries, pesticide exposure, long hours, and other potential individual and community-level health effects. A Health in All Policies approach requires actively engaging those sectors not traditionally considered as part of the health landscape and proactively considering the effects of their programs and policies (Rudolph et al., 2013).

By leveraging Extension's role and capacity to work across sectors in communities, as presented in the Cooperative Extension's National Framework for Health and Wellness (Rodgers & Braun, 2015), and by fostering a new lens that considers health, equity, and sustainability in all policies and programs, Extension will be positioned to better serve local communities. Extension can emerge as a valued partner and leader in shaping policies, systems, and environments that support the health of populations, places, and economies and assure healthy choices and contexts in which people live, learn, work, and play.

### **Environmental Context and Health**

It has been long known that human health is determined by a variety of biological and behavioral factors, including individual choices that help or harm health immediately or chronically over the life course (Bickenbach, 2015). We now realize that the environmental context, the places and conditions to which people are regularly exposed, substantially contributes to health outcomes as well. The quality of air, soil, and water that surround us are part of that context and affect human health, with the human influences on the environment, the structural and social features, also having health ramifications (WHO, 2008).

The structural (human-constructed) or “built environment” includes the design of and the ways that developed land is used and has great impact on health behaviors and health outcomes (CDC, 2011). This is reflected in the spatial patterning of health outcomes (Kawachi & Subramanian, 2007; LaVeist, Pollack, Thorpe, Fesahazion, & Gaskin, 2011) and in socioeconomic, racial, and ethnic health inequalities (Bleich, Jarlenski, Bell, & LaVeist, 2012; LaVeist et al., 2011; Marmot, 2005).

We have learned that social, cultural, physical, economic, and geographic environments, the social determinants of health, have a greater influence than medical care on how long and how well people live (McGinnis, Williams-Russo, & Knickman, 2002). Brownell and colleagues (2010) explain that although people are responsible for their individual choices, defined as the habitual decisions that affect their health, these choices are made and habits are influenced by the social, cultural, and environmental contexts in which choices are enacted. These contexts are strongly influenced by national and state government policies, as well as policies formed by local leaders – city planners, employers, school districts, public service agencies, and community organizations. These policy choices shape the social determinants of health and resource systems that either contribute to or detract from health equity (Brownell et al., 2010). For example, populations that have easy access to safe places to walk; convenient and affordable recreational facilities; public transportation connectivity; and live in well-planned, mixed-land use communities are more physically active than those without such built environment features (Auchincloss & Diez Roux, 2008; Galvez, Pearl, & Yen, 2010; Sallis & Glanz, 2009). The widespread lack of such environmental elements is thought to be a contributing factor in the U.S. obesity epidemic (Galvez et al., 2010; Sallis & Glanz, 2009).

Similarly, school and work environments can affect diet; physical activity; and the use of tobacco, alcohol, and other drugs (Katz, 2009). In schools, health is influenced by school food service menus, vending machines, recess access, and health and physical education. Workplaces affect health through workplace safety, access to healthcare, on-the-job physical demands, and stress.

### **Considering Policies and Policymakers**

A Health in All Policies approach acknowledges that decisions made and programs implemented, even those not shaped within the traditional health sector, have the potential to impact human health, both positively and negatively (Rudolph et al., 2013). As Rudolph and colleagues (2013) noted, adopting such an approach requires raising awareness across sectors and among decision makers to a cursory understanding of this reality at a minimum, and preferably, a deeper understanding of the import of this perspective. Such awareness can lead to proactively incorporating health considerations into the decision-making process in order to maximize positive and minimize negative human health impacts (Rudolph et al., 2013).

A foundational goal of Health in All Policies is that decision-makers, from all sectors and at every level, understand their sector's broad influences on health and the disparate health consequences of various policies during the program or policy development process (Association of State and Territorial Health Officials [ASTHO], 2013). Health in All Policies work is structured through the collaboration of "usual" and less traditional partners. The usual partners are the health sector entities, such as healthcare systems, public health, human service, and healthy people organizations and agencies. The less traditional are the public and private, organizational and governmental agencies that have not traditionally considered health impacts, such as land use, planning, transportation, housing, industry, business, economic, and environmental sectors (APHA, 2017; WHO, 2017).

Health in All Policies collaborations can build upon previous public health policy efforts, such as water fluoridation (engaging local water districts), tobacco restrictions (engaging business/industry and local/state governments), seatbelt and child restraint requirements (engaging industry, transportation, state governments, and local law enforcement), and school policies that require physical activities for students (engaging government, agriculture, and education at national, state, district, and school levels) (Rudolph et al., 2013).

In response to complex contemporary health issues, siloed resource systems, and shrinking budgets, Health in All Policies provides an approach that engages across sectors and stakeholders to collaboratively improve systems and optimize significant drivers of population health, equity, and sustainability.

As communities are asked to do environmental impact assessments before moving ahead with a project, health impact assessments, a tool of Health in All Policies work, can be completed to encourage these collaborations and promote a system perspective about health (ASTHO, 2013). The semi-structured, health impact assessment process can compel the players to acknowledge the possible future and past impacts of their activities on health, mitigating the negative health impacts of policies already in place while constructing new and better policies to encourage positive health outcomes (ASTHO, 2013).

### **Health in All Policies and the Role of Cooperative Extension**

For over 100 years, the Cooperative Extension Service has been a national, multisectoral system (U.S. Department of Agriculture [USDA], n.d.). The Cooperative Extension Service (CES) works broadly, through its own programs and policies and as a public organizational partner, toward strengthening agricultural and rural economies; enhancing natural resource ecosystems; and developing healthy consumers, families, and youth. As the outreach arm of public, Land-grant Universities (LGU), Extension translates research into informational and educational resources in each state and territory across the U.S. Within states, place-based educators

working directly with communities have developed strong, enduring relationships. These relationships include providing trusted information, consistent engagement, and reporting impacts (USDA, n.d.).

Successful Health in All Policies initiatives have several factors in common. These factors include promoting health, equity, and sustainability; supporting intersectoral collaboration; benefiting multiple partners; engaging stakeholders; and creating structural or process changes (Rudolph et al., 2013). Each of these is aligned with how Extension ordinarily operates. Extension efforts often focus on various dimensions of human health and development, striving to be equitable and sustainable. Many of Extension's programs and programming innately have these core health promotion and intersectoral elements, involving multiple stakeholders to target agriculture, food and nutrition, positive youth development, career and economic development, public lands use, and natural resources and ecosystems.

Additionally, Extension has the infrastructure and network to engage communities in uncovering how policies are developed and in learning how implemented policies can affect their health and equity. Extension can build upon its current expertise and ways of working in communities to create the potential for it to be an influential organizational leader in solving the "wicked" and interrelated population health challenges we face today. For example, Extension professionals could educate communities about the various micro-, meso- and macro-level policies that shape the environmental context of our communities that differentially impact residents. Those professionals can also conduct research-based assessments of health impacts to more fully inform the understanding of that environmental context. Finally, Extension can facilitate more engaged public policy discussions to sustain the conversation around potential population health, equity, and sustainability outcomes of local, state, and national policy agendas.

Therefore, in theory, CES is poised to engaged in Health in All Policies initiatives. Our questions are whether Extension faculty and staff are aware of the Health in All Policies approach and whether they feel prepared and motivated to engage with it.

To help answer these questions, the Health in All Policies Action Team gathered insights from Extension Family and Consumer Sciences (FCS) program leaders and FCS and Nutrition state Extension specialists to assess whether national and state Extension leaders were ready to adopt a Health in All Policies approach within their affiliated programs. The intent was to gather information to identify barriers and facilitators to adopting a Health in All Policies approach in the Cooperative Extension System, beginning with the program areas more traditionally associated with health. This approach was taken to help develop Extension-specific examples and talking points that could be incorporated into assessments and education across the program areas that may be less familiar with considering their programming in health-specific terms.

## Methods

We used a two-step process to establish awareness and shared meaning about Health in All Policies and then to gather insights to inform future actions and efforts to implement the approach. As a first step towards raising awareness, one of this paper's authors produced an interactive, informational webinar, Building Cooperative Extension's Capacity to Support Health in all Policy Issues Education: A Case for Strategic Planning (John, 2015), which was presented via eXtension's Creating Healthy Communities Community of Practice (CoP) in October of 2015.

Participants included over 35 national and state FCS-affiliated program leaders who had been invited by email to participate in advance of the 2015 annual meeting of the National Extension Association of Family and Consumer Sciences (NEAFCS). The presentation included an overview of why Extension needs to work effectively across social ecological levels; how policy, systems, and environmental strategies can help us do so; and how a Health in All Policies approach is aligned with and can be embedded in Extension work.

## Data Collection

A follow-up in-person session was held the following month at the 2015 NEAFCS annual meeting in West Virginia. Three Health in All Policies Action Team members used the webinar content as an informational prompt to facilitate discussion among over 50 state FCS program leaders, state FCS specialists, and national USDA FCS program leaders. In small groups, the participants responded to the following four open-ended questions developed by the Health in All Policies Action Team to elicit awareness of Health in All Policies and to inform efforts to implement the approach across Extension:

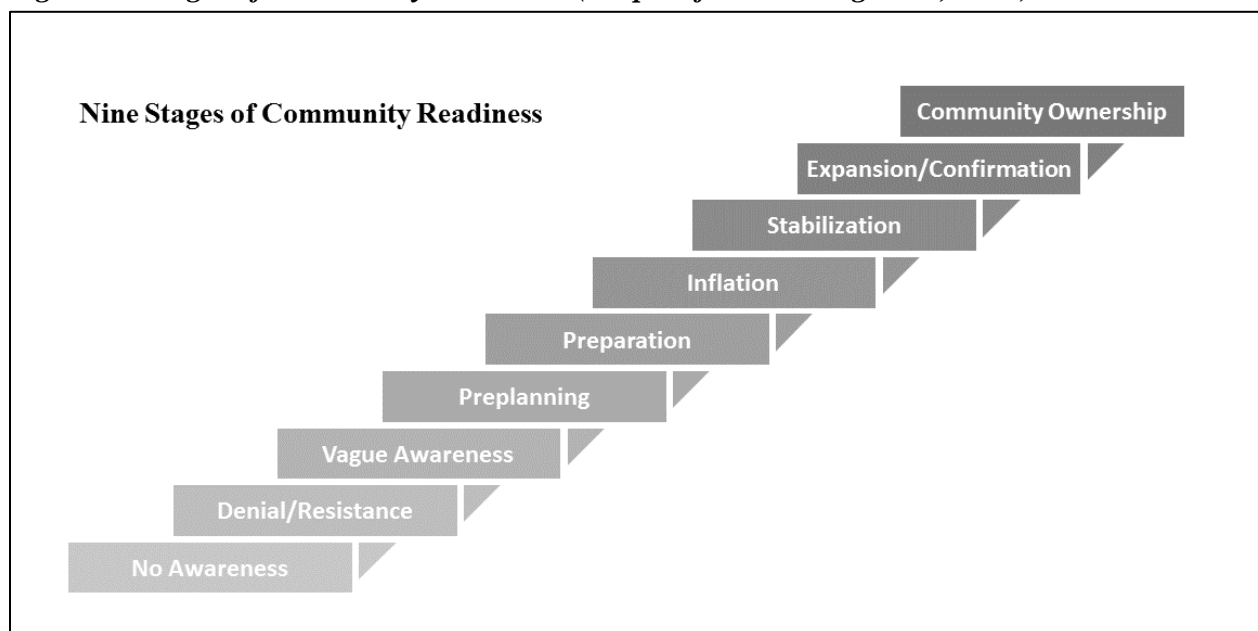
- (1) What is needed to equip FCS program leaders, and state and county staff with knowledge, skills, and attitudes around health policy (multisector partnership, policy conversations, population health/health disparities, etc.)?
- (2) What is needed to foster sustainable networks for Extension peer mentoring and professional development related to this topic?
- (3) What is needed to connect state/regional efforts and outcomes to the ECOP Health in All Policies work group to strengthen the visibility and value of Extension in this area?
- (4) What is needed to develop methods and metrics for evaluating outcomes and impacts – redefining the national FCS indicators for reporting program success?

Group facilitators transcribed all responses collected during the discussion.

## Data Analysis

After the meeting, Health in All Policies Action Team members coded the transcripts across six dimensions of Extension's "community readiness" for adopting a Health in All Policies approach: knowledge of issue, current efforts, knowledge of efforts, available resources, community climate, and leadership (Edwards, Jumper-Thurman, Plested, Oetting, & Swanson, 2000). Using the Edwards et al. (2000) framework, qualitative indicators were organized into a 9-level, criterion-anchored rating scale ranging from 1 (no awareness by community or leaders as an issue) through 9 (high level of community ownership). Figure 1 illustrates the nine levels of this scale.

**Figure 1. Stages of Community Readiness (adapted from Oetting et al., 2014)**



## Results

As shown in Table 1, FCS leaders perceived the Extension system as currently having low levels of readiness to adopt Health in All Policies as an approach to contribute to population health improvement in the communities Extension serves. Based on grouping of coded indicators, knowledge-related dimensions emerged lowest, around level 2 of the readiness scale or Denial/Resistance, defined as little recognition of the issue across the system. The available resource dimension emerged highest at near level 4 or Preplanning, where importance is acknowledged, but knowledge and resources are limited.



**Table 1. Community Readiness Ratings across Categories**

<b>Dimension</b>	<b>Readiness Score</b>
A – Current Efforts	2.75
B – Knowledge of Efforts	2
C – Leadership	3
D – Climate/Attitude	2.5
E – Knowledge of Issue	1.75
F – Available Resources	3.75
<b>Overall Community Readiness (average of all dimensions)</b>	<b>2.6</b>

Key for Readiness Score Scale: 1-No Awareness, 2-Denial/Resistance, 3-Vague Awareness, 4-Preplanning, 5-Preparation, 6-Initiation, 7-Stabilization, 8-Expansion/Confirmation, 9-Community Ownership

Overall, Extension community readiness to adopt a Health in All Policies approach was determined to be near level 3, a vague awareness of Health in All Policies, but with limited knowledge and no immediate motivation to act.

Health in All Policies team members also independently and iteratively coded the transcripts by using directed content analysis to identify emergent themes that reflected perceived resources and capacity to address Health in All Policies within Extension (Hsieh & Shannon, 2015). Six themes were identified that aligned with the resource and capacity components of community change. The following six themes are areas Extension would need to address in moving towards adopting a Health in All Policies approach: (1) a paradigm shift within Extension, (2) professional development of competencies, (3) transformational leaders and leadership support, (4) continued and new partnerships, (5) information access for all levels and disciplines of Extension, and (6) developing familiarity with the use of a health equity lens.

### **Paradigm Shift**

Although a Health in All Policies approach is consistent with much of how Extension works, moving from working on behavior change through direct education to working to change the behavioral context and systems was seen by participants as a deep shift that would require developing a system-wide shared vision and value for this new way of working. The metrics Extension uses to measure success are all directed towards individual behavior change, rather than toward context and system level change.

Participants felt it would be necessary to develop a common language and understanding about the meaning of a number of terms and activities. This included unpacking the definition of health as multidimensional (i.e., physical, mental, social, behavioral, cultural, etc.), clarifying

what is considered policy work (i.e., not all policy is legislative policy [big P] and much is locally and organizationally [little p] instituted), operationalizing “health equity lens,” and clarifying how advocacy differs from lobbying and builds on our educational model. They noted that “health” would need to be integrated explicitly as an objective into national, regional, and state Extension strategic plans in order to justify resource allocation and funding for Health in All Policies activities.

### **Professional Development of Competencies**

Participants explained that moving to a Health in All Policies perspective would require a substantial investment of resources to ensure that personnel within the Extension system develop competencies appropriate to their positional levels across all categories of skills needed for impactful population health work. These included recruiting and retaining people with specific expertise in health and public health; building on the facilitation, planning, and evaluation skills of existing personnel through trainings and with capacity-building tools; increasing the level of health and policy literacy within Extension; prioritizing time for planning, training, and taking action; and identifying appropriate funding mechanisms. This new area of professional development will require identifying where there is already expertise within the Extension system and connecting with external experts at the local, state, and national levels.

### **Transformational Leaders and Leadership**

Support from leaders and administrators at all levels of Extension and the LGU system was seen as crucial for action and success. They were seen as keys to providing clarity for Extension’s role in policy, systems, and environment work and to galvanizing state-level stakeholders in support of the effort. Although only FCS leaders took part in the discussion, participants recognized the need to engage leaders from across program areas (i.e., youth development, nutrition, agriculture and natural resources, community development, among others) and from across academia (particularly in public health) as advocates. Leaders were seen as key voices to explain this shift in thinking, to allocate resources and expertise, and to provide strategic guidance for helping efforts to be proactive rather than reactive.

### **Partners/Collaborators and Partnerships**

Because the Health in All Policies framework is a collaborative process at its core, participants noted the need to identify cross-sector and cross-Extension stakeholders with shared values and priorities. These include academic partners with expertise in Health in All Policies work, as well as community partners at all levels, including regional and multi-state. Partnerships could benefit from contracts, memorandums of understanding, interagency agreements, and the like to formalize collaborative efforts. Local level collaborators, such as community and neighborhood

organizations who are those most proximal to the more traditional Extension audiences, were seen as key partners. FCS leaders suggested seeking funds collaboratively as a way to help assure the partnership is recognized. County government partners also play a crucial role partly because of the current funding model that has counties sharing responsibilities for financially supporting local Extension offices. Therefore, county governmental partners would both need to understand and value a Health in All Policies approach for it to be successful.

### **Communications/Information Access**

Shared language and clear and efficient communications were noted as essential for effective adoption and implementation of a Health in All Policies approach. Participants stated that there will need to be both internal mechanisms for sharing information about efforts within programs, across the Extension system, and within the USDA National Institute of Food and Agriculture, as well as external academic and practice-based dissemination of strategies, and broader external marketing campaigns to communicate health-focused priorities to stakeholders.

### **Health Equity Lens**

Participants saw Health in All Policies as an approach requiring familiarity with social determinants of health, new metrics related to systems-level outcomes of policy action, as well as collective impact. This new way of working will also require information about, access to, and competency with population-level behavioral data and other large-scale data sources (such as epidemiological data, geographic information systems, and census data) in order to link policy change to targeted behaviors at the population level to achieve health equity.

### **Conclusions**

This study suggests that, at least within the Family and Consumer Sciences program area, members of Extension had a low level of awareness of Health in All Policies. In discussion, though, they saw it as a potentially viable approach for Extension to use to incorporate health, equity, and sustainability considerations into decision-making across sectors and policy areas. Informants also noted several resource and capacity considerations associated with Extension adopting the Health in All Policies approach. Raising awareness about how the Cooperative Extension System could systematically incorporate a Health in All Policies approach is a necessary starting point for more fully engaging leadership, faculty, and staff in this effort.

### **Recommendations**

The Cooperative Extension System and the communities Extension serves would benefit from considering how to integrate health-focused work across program areas (Rodgers & Braun,

2015). Although we may have discrete program goals aimed at healthy economies (such as through agriculture and food system development), a healthy planet (such as through forest land management and ecosystem resilience), and healthy people (such as through positive youth development, nutrition, and chronic disease prevention), we have much to gain by synergy for human health impacts.

Traditionally, Extension has worked at the level of the individual, through direct programming, and has evaluated effectiveness as a count of audience reached, knowledge gained, and behaviors changed. As our National Framework for Health and Wellness illustrates (Rodgers & Braun, 2015), Cooperative Extension is a system positioned to transform. We have been challenged to consider a broader, systems-level framework to supplement and increase the reach and effectiveness of our traditional direct education delivery, an intervention approach that takes considerable individual effort for little population health effect (Frieden, 2010). We had previously considered, and through further reflection, believe that a Health in All Policies approach provides the needed broader framework. Extension's multilevel federal, state, and local partnership engages a complex and large network of professionals who could bring valuable expertise to this Health in All Policies programmatic direction.

One example of transformation in practice is the contribution of a number of state Cooperative Extension Services to the Supplemental Nutrition Assistance Program Education (SNAP-Ed) obesity prevention toolkit for states (USDA, 2017). This compendium of multi-level strategies and interventions features evidence-based policy, systems, and environmental change and evaluation tools motivated and supported by the funder that re-characterized SNAP-Ed programming to address not only direct nutrition education but also to work upstream systematically. By so doing, it facilitates greater and more lasting impact by helping to change the contexts in which economically vulnerable populations enact choices. As our readiness assessment demonstrates, although there are pockets across Extension that have embraced this approach, it is not yet pervasive.

What follows are additional examples of how Extension can and does work across programs, sectors, and sociological levels in ways that could align with a Health in All Policies approach.

**Translational science.** Extension can facilitate healthy community change by mobilizing Extension professionals to raise awareness of local health issues and identify need for policy and systems change. Extension employs professionals who are experts in their disciplines and chosen fields of practice, with an expectation that they will translate their research knowledge into actionable information to serve their communities. With training, these subject matter experts could have a practical understanding of how health plays out in all Extension policies and programs. Tapping into those translational skills, trained Extension professionals can decipher the epidemiology of community health issues to further explain trends and highlight the

health and equity issues. Given that Extension professionals and Extension research facilities are embedded in communities, they can help frame issues and discuss solutions based on the priorities set by various community stakeholders, policy makers, and politicians.

Using a Health in All Policies lens, Extension, as a highly trusted information source, can provide detailed, community-supporting background on these issues; identify gaps in policies that disproportionately burden some groups more than others; and inform on best policy practices and system efficiencies.

**Facilitating multisectoral collaboration.** Changes to the health of a community come from working across all sectors of influence, such as health, education, business, public health, government, human services, and community organizations (Marmot, 2005; Resnik, 2007). For example, transportation policies can encourage physical activity (pedestrian- and bicycle-friendly community design); school policies can improve access to local agriculture in school meals and physical activity for all students; and natural resource and land use policies can affect housing, agricultural production, and recreation. Working with only one sector is not an effective way to gain long-term sustainable changes. Infusing health into all policies requires intersectoral efforts. Extension often works across levels of influence and engages partners to come together around issues of improvement. Whether partnering with neighborhood schools, businesses, or councils or working with intersectoral grant teams to discover and solve community problems, Extension already reaches across divides to bring needed programming to the people and places it serves and to benefit multiple partners. Mutually beneficial collaborations are a part of Extension's strength. Much of Extension's work would not progress without stakeholder engagement, shared vested interests, and mutual gains resulting from collaborative and cooperative efforts. Extension is experienced in providing this sort of cross-sector information and analysis for decision making in policy areas from affordable housing (Thering, 2009) to hydraulic fracturing (i.e., fracking) (Peek et al., 2015). Introducing health as one of the considerations would bring additional stakeholders into the conversation.

Another way that Extension can facilitate Health in All Policies efforts is to be the conduit that brings the different sectors together to begin the dialogue and work on creating change. Extension professionals can help identify key influencers that need to be included in the discussion. These influencers may range from community leaders to government and private sector staff. Assembling an informed group of people is necessary in understanding the focal health issue, what each individual sector is currently doing, what efforts can be brought together, and what other efforts are needed. Streamlining resources is necessary to prevent duplication of efforts and to have one solid voice within the community. Multiple efforts with varying messages can pollute efforts and confuse the community. Extension bringing together key influencers can help focus efforts for a larger, collective impact.

**Dissemination and training.** Because of Extension's reach across sectors, Extension can also be used as a channel of dissemination for changes to policies that have been made. Extension has direct lines of access within communities and can help inform the public on policy implementation, changes, and implications. Extension is a resource for information for its communities and can provide education to the public on how they are, or could be, impacted by policies. Extension personnel can coordinate their resources and assist with facilitating place-based information to concentrate the messages in areas of highest need, impact, and effort.

Extension's efforts and effectiveness are increased when we expand our audience beyond the general public. By providing education to other organizational professionals, we can prepare them to facilitate Health in All Policies within their home organizations. Whether the organization is a place of worship or the local courthouse, health improvement efforts have to occur on multiple levels, through multiple venues, and in multiple settings. Extension professionals can implement train-the-trainer types of settings to further Health in All Policies work.

### **Implications for Practice**

There is movement towards incorporating more upstream, systems level work in Extension efforts to better address health inequities and the social and structural barriers that determine the ability of individuals and groups to easily make informed choices about their health (Andress & Fitch, 2016; Auguste, Garcia, Headrick, & Shelnett, 2017). At the same time, there are substantial challenges to expanding this effort. Incorporating a health and health equity-focused systems model throughout Extension and across program areas will require first increasing the perceived value of these impacts and then targeting professional development within the system. As the program leaders responding to our readiness assessment noted, in order for Cooperative Extension Health in All Policies initiatives to be successful, and in order to justify resource allocation and funding, "health" will need to be explicitly integrated as an objective into strategic planning system-wide. Preliminary efforts to do this at the national level have begun through the "Healthy Food Systems, Healthy People" initiative that calls for collaborations and integration among agriculture, food, nutrition, and health care systems in order to improve health and reduce chronic disease (Association of Public and Land-grant Universities, 2016).

The results of this study also pointed out the need for skills-based professional development training to support Health in All Policies work. The ECOP Health in All Policies Education team launched the first steps in that effort and developed an online training module to begin to build Health in All Policies capacity of Extension practitioners as partners in decision-making processes and outcomes around health. This online course illustrates how Health in All Policies can be used as a strategy for achieving population health outcomes. It also advocates for Extension professionals to adopt a Health in All Policies approach within their programs and to

work across disciplines in Extension programmatic areas when engaging in this work. This free, online course, *Extension Health in All Policies: Building Cross-Program Awareness for Health Impacts of Decision-Making*, is available at <https://pace.oregonstate.edu/catalog/extension-health-all-policies-hiap>. Additional trainings that support the development of specific competencies that staff need in order to engage successfully in Health in All Policies, similar to public health competencies, could be adapted to be specific to the Extension system.

Systematically pursuing Health in All Policies initiatives will also require outreach to our community partners and stakeholders to help expand their sense of who Extension is and what we are capable of doing. Support for this outreach will need to incorporate evidence of the reach and effectiveness of Health in All Policies approaches. These evaluation activities will require systems-level approaches to evaluation that incorporate sophisticated quantitative and qualitative methodologies that move beyond some of the more traditional approaches to evaluating direct service programming (Thering, 2009; Trickett et al., 2011).

Advances in systems science methodologies offer particular promise in uncovering both powerful general strategies and the means to tailor them for sustainable application in specific communities (Economos & Hammond, 2017). These can be incorporated into practice-based frameworks for Health in All Policies evaluation (Gase et al., 2016).

This preliminary work in assessing the Cooperative Extension System's readiness and needs focused on the program areas most likely to be familiar with and experienced in a Health in All Policies approach – those in Family and Consumer Sciences. Although this is a limitation in that the broader Extension community is not represented, we felt that starting with an audience somewhat familiar with the topic would allow us to identify Extension-specific “talking points” for those for whom the concept is less familiar.

Going forward, it is important to recognize that a Health in All Policies effort is by its nature cross-level and multisectoral. Efforts to raise awareness and competencies in this approach will need to expand to engage the agricultural, natural resource, community development, and other program areas and to incorporate field staff and volunteers, as well as program leaders and specialists. A successful implementation requires awareness, buy-in, and training throughout the Cooperative Extension System.

Finally, in order for Health in All Policies work to be widely taken up and to become sustainable within the Cooperative Extension System, it will need to be labeled as a priority and funded as such. The funding can come from cross-sector competitive opportunities from partnered sponsors, both traditional ones, such as the U.S. Department of Agriculture, and new partnerships, such as the recent joint efforts between 4-H and the Robert Wood Johnson Foundation, to fund efforts aligned with building a community culture of health.

Although there are challenges to adopting and working within a Health in All Policies framework, by embracing this approach, Extension can substantially enhance its contributions to improvements in population health to help meet our 21st century goal to “increase the number of Americans who are healthy at every stage of life” (Braun et al., 2014, p. 4).

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## **Advancing Methodology: From Concept Mapping to Mobile Messaging Campaign**

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*This article describes the progression of the Health Insurance Literacy (HIL) Action Team's efforts from the initial charge by the Extension Committee on Organization and Policy (ECOP) of identifying priorities for Cooperative Extension health programming to developing and testing a national mobile messaging campaign designed to change health insurance knowledge, confidence, and behaviors of millennials. It highlights relevant empirical literature, summarizes the results of a national pulse online survey administered to Extension professionals and how they were applied to this project, reviews the Design Thinking and concept mapping process, and describes the development and testing of mobile messages. Anticipated outcomes of the mobile messaging campaign are discussed. Sources of data are the national pulse online survey along with insights gleaned from Extension professionals who participated in workshops, an eXtension Design-a-thon, and responses to a survey of millennials about experiences using health insurance, social media, and texting. This effort contributes to advancing Extension's capacity to deliver programming related to health insurance education in innovative and effective ways.*

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## **Introduction**

Understanding how health insurance works continues to be a major challenge for most Americans. Many have a poor understanding of what they purchase because documents describing benefits can be confusing, benefit structures are complex, and consumers lack the knowledge and skills to sort out the implications of selecting one policy over another (American Institutes for Research, 2013; Stern, 2015). Each year, insurers continue to offer new plan options, thus adding to consumers' challenges.

Cooperative Extension (Extension) is well positioned to assist consumers with these challenges because of its long history of helping individuals and families obtain the knowledge and services they need to manage in complex situations (U.S. Department of Agriculture, National Institute of Food and Agriculture, n.d.). This article describes the process of identifying an educational strategy that could support specific aspects of Extension educators' efforts to teach about health insurance. The strategy identified was a national mobile messaging campaign designed to change health insurance knowledge, confidence, and behaviors of millennials.

In this article, we will discuss the existing environment and then highlight relevant empirical findings related to health insurance literacy. Next, we will describe existing efforts within Extension to educate consumers about the choice and use of health insurance plans along with the process of refining the teaching strategy that was identified. That process included a Design Thinking and concept mapping process (Dubberly, 2016) and a survey. The survey, targeting millennials, was designed to obtain information on their experiences using health insurance and how they use social media. Finally, we will discuss considerations related to the development and testing of mobile messages as well as anticipated outcomes of the mobile messaging project.

## **Understanding the Existing Environment**

### **Health Insurance Literacy**

The Federal Affordable Care Act (ACA) requires families to enroll in and carry qualified health insurance year-round (U.S. Department of Health and Human Services, n.d.). Research continues to show that, while many consumers have greater access to health care services, this increased choice has led to greater responsibility and an increased need for information about choosing and using health insurance (American Institutes for Research, 2013; Tennyson, 2011). Many Americans do not understand their health insurance options or how to use their insurance.

Close to 50% of consumers report lacking confidence in selecting a plan (Brown et al., 2017a). In general, consumers do not understand basic health insurance terms such as premium, deductible, copayment, and provider network. They are not able to calculate simple costs related to out-of-pocket expenses, deductibles, and co-payments (American Institutes for Research, 2013; Norton, Hamel, & Brodie, 2014).

In their investigation of predictors of consumers' health insurance knowledge, Osmane and Faulcon Bowen (2017) surveyed literature related to financial services and health insurance from 1981 through 2016. Sociodemographic characteristics, health status, use of insurance, and the structure of health insurance plans were identified as factors affecting an individual's health insurance literacy.

Health insurance literacy refers to consumers' knowledge, ability, and confidence to find, use, and evaluate information in health insurance plans; choose the plan that best meets their and their family's needs based on their financial situation and health status; and use the health insurance plan once purchased (Quincy, 2012). Through education prior to the policy enrollment decision, consumers purchasing coverage may reduce costs and increase satisfaction with their health insurance policy.

As described in Brown et al. (2017a), health insurance education prepares consumers to choose the best medical, vision, dental, and pharmaceutical policies for their needs. Through health insurance education, consumers can learn how to use their insurance plans, increase skills needed to estimate and plan for out-of-pocket costs, gain confidence, and ultimately help reduce their health care costs.

### **Health Insurance Literacy Efforts within Cooperative Extension**

In 2014, a task force of Extension leaders released a report entitled, Cooperative Extension's National Framework for Health and Wellness (Braun et al., 2014). The report identified six priority areas to address through Extension programming into the next century. The ultimate goal is to move the Cooperative Extension System towards being a leader in health research and education in much the same way its research and education impacted agriculture in the last century. Health insurance literacy was one of those priority areas. The other priority areas were health policy issues education; health literacy; integrated nutrition, health, environment, and agricultural systems; chronic disease prevention and management; and positive youth development.

For each of the six priority areas, an Action Team was appointed, the membership of which was made up of research and Extension faculty, field educators, and Extension directors and/or administrators with research and/or programmatic expertise. Responsibilities of the Action

Teams were to select and invite additional external partners, identify and develop systematic programs and curriculum, engage colleagues in professional development, and initiate system-wide program impact evaluation. Brown et al. (2017b) summarized the process more fully.

**Extension educator assessment survey.** Brown et al. (2017b) also described an effort by the ECOP Health Insurance Literacy (HIL) Action Team to assess the health insurance education and other outreach efforts within the Cooperative Extension System. This effort included an online survey of Extension educators throughout the country. Those surveyed included county, regional, and statewide educators/agents, as well as state level faculty and staff. The survey sought to identify who was teaching about health insurance, reasons that health insurance was not an educational topic taught, and methods educators were willing to explore to teach about health insurance.

The HIL Action Team developed the survey. The survey had two phases. Phase 1 targeted state program leaders or the appropriate designee for impact data from states on current health insurance literacy efforts. Phase 2 targeted field educators in charge of program delivery to provide feedback on existing programming and challenges to successful program implementation. Program leaders and educators from Agriculture, Community Resiliency, and Family and Consumer Sciences were sampled. These disciplines were targeted based on the preliminary analysis that they were the most likely to teach about health insurance topics. Phase 1 occurred during August 2015 and Phase 2 during September 2015.

In Phase 1, 9 states responded and reported activities and outputs that included web-based articles, attendance at health fairs and professional development for Extension Educators. In Phase 2, 170 Extension educators from 19 states (38%) participated. The respondents to the survey included nutrition (33%), finance (21%), health (21%), and agricultural (3%) educators.

A majority of the educators worked with adult low-income audiences: 64% worked with young adults (ages 18 to 34), and 67% worked with seniors (65 and over). Approximately 37% (n = 59) of the educators indicated they taught about health insurance topics in some form. Of these, the finance educators were most likely (71%) to teach health insurance topics, with nutrition educators being least likely (21%). Among those who taught about health insurance, 59% reported getting information and teaching resources from Extension sources such as specialists and eXtension, state insurance agencies, and the federal government (Brown et al., 2017b).

A barrier cited by 50% of those teaching health insurance topics was lack of comfort and confidence with their own level of knowledge about health insurance. Time limitations were also noted as a barrier by 16% of those teaching health insurance topics.



Two-thirds of survey respondents reported that they do not teach health insurance topics. The four most commonly cited reasons they did not were lack of confidence in their knowledge about the subject (27%), belief that other organizations do this better than theirs (14%), exclusion of health insurance topics as an educational topic in their organization (12%), and the inability to keep up with changes (10%).

Those not currently teaching health insurance topics were also asked about educational methods they would be willing to explore in relation to teaching about health insurance. Frequently cited responses included posting information or links to Facebook pages (18%), doing short (20-30 minute) programs (18%), providing short articles to local broadcast or print media (18%), linking to health insurance information from web pages (18%), and including short articles in newsletters (14%).

An important finding of the survey was that, in response to the question asking about preferred educational methods, nearly all of the respondents (93%) not currently teaching health insurance topics were willing to explore teaching about health insurance using indirect or distance teaching methods. This finding led the HIL Action Team to explore the use of technology as a teaching strategy for Extension professionals who are educating consumers about choosing and using health insurance.

### **Refining the Teaching Strategy**

Health insurance education can make a difference for consumers and providers (Brown et al., 2017a). For consumers, it supports their decision making process in choosing the best plans for their needs. Education can also help build their knowledge of the features of their insurance plans, such as essential benefits and preventative screening, and help them to understand the financial benefit of using network discounts and avoiding the use of out-of-network providers. Finally, increasing consumers' abilities to estimate and plan for out-of-pocket expenses can lessen the stress on household budgets over time, leading to an increase in overall well-being. Insurance providers may also see a benefit by enrolling better-informed consumers who experience greater satisfaction with their health insurance plans than less knowledgeable consumers.

### **Project Development through the eXtension Community Issue Corps Design-a-thon**

eXtension was established by the U.S. Cooperative Extension System to increase Extension's "effectiveness in addressing issues of importance to the nation" (eXtension, n.d.a) by providing opportunities for Extension professionals to collaborate, co-learn and co-create. One way this mission is accomplished is through communities of practice, whose members are specialists and educators working in and having an interest in the topic area related to each specific community

of practice (CoP). The Financial Security for All (FSA) CoP was one of eight eXtension pioneer Communities of Practice. Since 2005, the FSA CoP has pursued the eXtension mission by affording members opportunities for connection, innovation, creative collaboration, and impact (Kiss & O’Neill, 2016).

In 2016, eXtension launched the first Community Issue Corps targeting Communities of Practice and Learning Networks (Griffin, 2016). The goal of the Community Issue Corps was to select and support projects targeting local, area, state, or national audiences with the potential to make a visible and measurable impact at the local level. The signature activity of the Community Issue Corps was a three-day design event, called the Design-a-thon, that was structured to support project teams in the refinement of their projects.

Several HIL Action Team members are also members of the eXtension Financial Security for All Community of Practice (eXtension, n.d.b). When approached by Action Team members with the idea of a Community Issue Corps project focused on health insurance education, Community of Practice leaders were supportive of the team’s application. The Health Insurance Literacy Action Team’s application was ultimately one of eight projects selected (“Community Issue Corps 2016-17,” n.d.).

Through insights gained from the Brown et al. (2017b) study, the Action Team sought to develop additional ways to support family health and financial wellbeing at the local level. During a June 2016 webinar hosted by the Financial Security for All community (Brown et al., 2016), the HIL Action Team members asked participants if they thought text messaging was a good way to share information about health insurance, and if so, what type of information would be useful to present. In general, the response from these individuals was positive. Webinar participants also identified some considerations that should be kept in mind and shared several ideas on content that contributed to the team’s thinking about the potential challenges involved when using mobile delivery methods. For example, considerations related to maintaining and enhancing the connection to local Extension professionals and suggestions for content included information about health insurance options.

The HIL Action Team’s proposed solution, and also the Team’s Community Issue Corps project, was to test text messaging as a way to share appropriate and timely information about choosing and using health insurance with local Extension audiences. Katras (2016) described the four stages of the Design-a-thon process in which three members of the HIL Action Team participated during the 2016 three-day eXtension Design-a-thon event.

- Stage one, “Design Thinking and Concept Mapping,” challenged the HIL Action Team to create a visual representation of the texting project in the form of a concept map (Dubberly, 2016). In order to do this, Team members worked together to

explore possibilities, question concepts, and identify new and existing relationships among concepts. The goal of concept mapping is to create a system describing the issue resulting in a diagram and a shared understanding among team members. The process of developing a concept map provides a deeper understanding of the issue by thinking through the complex web of interactions and revealing new and innovative steps to provide overall clarity to the project intent and potential impact.

- Stage two, “Peer Feedback,” gave Team members an opportunity to present their concept map to peer reviewers through an iterative process of explanation and revision of the concept map. This resulted in increasing clarity of concepts included and simplicity in how they were mapped.
- Stage three, “Key Informants,” introduced Team members to twelve individuals with expertise in fields such as instructional design, social media marketing, evaluation, and funding. These key informants provided a sounding board for ideas and assisted the team in refining and strengthening the concept map.
- Stage four, “Project Pitch,” was the chance to share the final concept map with other Teams, peer reviewers, and key informants. It was an opportunity to practice a “pitch” that could be used when seeking support, funding, and resources to carry out the project.

Participation in the Design-a-thon helped to improve the development of the mobile messaging project by being able to gather knowledge and innovative ideas from a team of key informants and opportunities for peer reviews. It challenged the team to think through in a visual way the process as it had initially been planned and forced the team to consider and identify responses to tough questions about design, evaluation, and outcomes.

### **Survey of Millennials’ Experiences with Health Insurance and Use of Social Media**

According to DMR Business Statistics (Smith, 2017), millennials, individuals born between 1981 and 1997, represented 27% of the nation’s population and 25% of its workforce in 2016. The Nielsen Company (2014) found that millennials are the most diverse generation in U.S. history, with 19% being Hispanic, 14% African-American, and 5% Asian. The Nielsen study also found that 23% had a bachelor’s degree or higher, and that younger (ages 18-27) millennials had a median income of \$25,000, while older (ages 28-36) millennials’ incomes averaged \$48,000. Twenty-one percent of millennials were married.

In examining millennials’ experiences with health insurance, The Nielsen Company (2014) found that 34% of younger millennials and 27% of older millennials had no health insurance, and

because of their lack of insurance, young millennials were twice as likely than average to visit free health and urgent care clinics and older millennials almost 1.5 times more likely than average. The report found that one-third of young millennials were benefiting from the ACA changes that allowed them to remain on their parents' health insurance until age 26. Millennials in the study were also more likely than previous generations to believe that the reforms implemented by the ACA would have a positive impact on improving their health.

Relevant to the HIL Action Team's project, according to Smith (2017), in 2017, millennials also spent an average of 19 hours on their smartphones each week, with 83% of them reporting that a majority of that time was used to text.

Two features of the HIL Action Team's project development process were the goals of advancing methodology and increasing Extension's capacity to deliver health insurance programming to millennials. To do that, prior to field testing and piloting of the mobile messaging project, an online survey of millennials was developed to help better understand millennials' experience with health insurance, as well as their use of social media.

The online millennial survey was developed and conducted by the HIL Action Team to seek further information from the target age group, those born between 1982 and 1997 and currently aged 20 to 35 years old, about their experiences using health insurance and how they use social media. The survey was conducted online using the Qualtrics® online survey service.

The instrument included questions to help gain an understanding of health insurance related issues, social media platforms, and text messaging formats that are of interest and convenient for the target age group. For additional information about the survey, contact the lead author.

Employing this preprogram millennial assessment survey process provided insights into the potential effectiveness of using technology for efforts with this targeted audience. It also served as a way to assess areas for content improvement and confirm that the platform chosen for the mobile messaging project was relevant and useful to the target age group.

Using the online sample feature available through Qualtrics®, data were collected during the first week of December 2017. In addition to the age criteria, other data collection parameters requested from Qualtrics for the survey sample included a 50:50 gender split, 20% married, and 20% with children. Due to oversampling, the contracted sample size of 400 observations was exceeded by 21 cases. In all, there were 415 respondents with usable responses to the majority of survey questions. Because the focus of this article is the process followed to create the mobile messaging project, discussion of survey results is limited to descriptive findings.

Table 1 summarizes the survey respondents' demographic characteristics, omitting the missing cases on a variable-by-variable basis.

**Table 1. Demographics of Millennial Survey Respondents**

Variable	% of Respondents
<b>Gender (N = 414)</b>	
Male	49%
Female	50%
<b>Race (N = 413)</b>	
White, non-Hispanic	67%
White, Hispanic	8%
Black/African American	12%
Hispanic/Latino	5%
Asian American	4%
Native American/Pacific Islander	2%
Other	2%
<b>Highest Level of Education (N = 413)</b>	
Some high school	4%
High school diploma or GED	25%
Some college	35%
Associate's degree	12%
Bachelor's degree	20%
Master's degree or higher	4%
<b>Annual Household Income (N = 414)</b>	
\$24,999 or less	25%
\$25,000 to \$34,999	19%
\$35,000 to \$49,999	20%
\$50,000 to \$74,999	17%
\$75,000 to \$99,999	8%
\$100,000 or more	7%
Prefer not to answer	5%
<b>Marital Status (N = 371)</b>	
Never married	56%
Co-habituating	9%
Married	30%
Divorced, separated, or widowed	5%
<b>Number of Children in the Household (N = 397)</b>	
None	60%
One	16%
Two	12%
Three	8%
Four or more	4%

*Note:* Percentages may not total 100% due to rounding.

The mean age of those who responded was just under 27 years old. As shown in Table 1, the gender of those who responded was almost evenly split between males and females. While the predominant race of the respondents was White, one quarter of the respondents identified as being from other races.

Nearly half of the millennial respondents (47%) had attained some college or an Associate's degree, while 20% of them had earned a Bachelor's degree. Annual household income varied, with a quarter of the respondents having incomes of \$24,999 or less and another quarter having incomes between \$50,000 and \$99,999. More than half of the respondents (56%) had never married, while 30% were currently married. In terms of children, 60% of the respondents lived in households with no children. For the most part, the characteristics of those who responded to the demographic survey items mirror those of the millennial age cohort as previously described by The Nielson Company (2014) and Smith (2017).

**Experiences using health insurance.** When asked which word best described their health, 71% of the millennial respondents chose "good" or "very good." Another 18% chose "excellent." Fewer than 2% chose "poor."

Four out of five respondents indicated they had health insurance at the time of the survey. Of those with health insurance, 23% did not know what kind of health insurance plan they had, 12% indicated they had a Marketplace health plan, 27% of respondents were covered by a Health Maintenance Organization (HMO), and 29% were covered by a Preferred Provider Organization (PPO).

The majority of millennial respondents (53%) received information on their health insurance from their employer, while 24% received information from the state, and 14% received information from the Marketplace. When asked how confident they were that they understand health insurance, the mean response was 6 on a scale ranging from 0 to 10, from low confidence to high confidence.

A series of questions collected information about how respondents chose their health insurance plans, their use of specialists and emergency rooms, and their understanding of insurance terms and plan provisions. Analysis of the full dataset is still in process and will be reported when that analysis is completed.

**Use of social media and texting.** In an effort to further understand the mobile communication methods that are already part of these millennial consumers' daily habits, the survey asked about the respondents' uses of social media and texting.

Table 2 shows the millennial respondents' reported frequencies of checking selected forms of social media. The social media platform checked most frequently by respondents was Facebook.

Two-thirds of respondents checked Facebook more than once per day, and another 11% checked it once per day. The social media platform least used by respondents was Twitter, with 51% not checking it at all. Almost one-third of the respondents did not use Instagram or Snapchat.

**Table 2. Frequency of Checking Social Media by Millennial Survey Respondents (N = 415)**

Social Media Type	Frequency of Checking (% of Respondents)					
	More Than Once Per Day	Once Per Day	A Few Times a Week	Weekly	Less Than Weekly	Not At All
Facebook	67%	11%	6%	3%	5%	7%
Twitter	17%	8%	9%	4%	11%	51%
Instagram	38%	11%	9%	5%	7%	30%
Snapchat	40%	8%	7%	5%	5%	34%

Table 3 summarizes the respondents' daily receipt of text messages from various sources.

**Table 3. Daily Text Messages Received by Millennial Survey Respondents (N = 415)**

Source of Text Messages	Approximate Number of Text Messages Received Per Day (% of Respondents)					
	0 – 10	11 – 20	21 – 30	31 – 40	41 – 50	50+
<b>Received From:</b>						
Closest friends	41%	23%	12%	9%	4%	11%
Other friends	68%	16%	9%	4%	2%	1%
Family members	52%	23%	14%	5%	3%	4%
News/media outlets	84%	5%	4%	3%	2%	1%
Advertisers	84%	5%	5%	3%	2%	1%
People with whom you do business (landlord, work associates)	76%	11%	6%	3%	2%	1%

The majority of respondents reported receiving the most text messages per day from their closest friends and family members. Slightly more than 10% of them reported receiving 50 or more texts per day from their closest friends. Very few received texts daily from news/media outlets, advertisers, or people with whom they did business, such as landlords or work associates.

### Development and Testing of Mobile Messages

Based on insights gained from planning activities and information from surveys conducted by the HIL Action Team, a mobile messaging pilot project was developed to increase millennials' health insurance literacy through a steady flow of quick, easy-to-understand "content bites" that would be delivered frequently through mobile methods already part of their daily habits, such as texting, Snapchat, and/or Facebook.

The mobile messaging project pilot will start in the Spring of 2018 and run approximately six to nine months. The goals of the pilot campaign are to (1) increase knowledge and confidence of participants when choosing and using essential health insurance benefits and (2) increase participants' motivation to take advantage of essential health benefits. Findings from the pilot will be used to refine the messages before opening the platform to more audiences.

### **Implications for Practice for Cooperative Extension**

Cooperative Extension is well suited to be a leader in health insurance education using innovative approaches. With a presence in every county in the United States, Extension is unparalleled in the depth and breadth of its reach across the country. Extension already has trusted relationships and provides unbiased information to populations likely to benefit from increasing their health insurance knowledge and confidence.

However, the project survey results revealed that not all Extension educators feel comfortable or confident in teaching health insurance topics. A mobile messaging campaign would provide an opportunity for capacity building from multistate groups, such as this Health Insurance Literacy Action Team, which has the content expertise to develop appropriate educational materials.

While not a surprise, results from the survey of millennials suggest that health insurance is only moderately understood. Almost one quarter of the millennial respondents with health insurance (23%) did not know what kind of insurance plan they had. Survey results also showed that over half of the respondents received health insurance information from their employers. This affords an opportunity for Extension to partner with employers to fill this important educational gap.

Extension professionals indicated that their preferred delivery methods for health insurance education were through indirect or distance education approaches. This supports the development of innovative methodologies such as mobile delivery or online methods. Mobile delivery is also well-aligned with the way millennials use social media and mobile messaging platforms.

However, to have the greatest impact, the challenge for Extension will be to develop effective messaging and become a trusted source for health insurance education for millennial audiences.

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## **Cooperative Extension and Health Literacy: A National Focus**

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*Health literacy is often defined as the degree to which an individual has the capacity to obtain, communicate, process and understand basic health information and services to make appropriate health decisions. Research shows that 30 million Americans have Below Basic health literacy skills. People with low health literacy skills contribute to higher utilization of health care services. This equates to an excess of \$230 billion a year in health care costs linked to low literacy in the United States. The primary responsibility for improving health literacy lies with public health professionals and the health care and public health systems. However, studies find that interventions using principles of health literacy, applied in community-based settings, can result in improved outcomes at the population level. In this article, the Health Literacy Action Team members consider the role of Extension in this important area, and suggest practices in incorporating health literacy into existing Extension programs and educational materials, and future resources for Extension and community partners.*

**Keywords:** Cooperative Extension, Extension, Extension programs, health, health care systems, health literacy, public health, Health and Wellness Framework, ECOP Action Teams

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## Introduction

Given the national trends in health, the Extension Committee on Organization and Policy (ECOP) established a Health Task Force whose role was to review health priorities both internal and external to Cooperative Extension (Extension). The goal of the Task Force was to identify emerging needs and how Extension might best respond to these needs, and to create a new programmatic focus to positively influence the social, economic, and environmental determinants of health.

The research and work of the Task Force resulted in the Cooperative Extension's National Framework for Health and Wellness (Braun et al., 2014) that was adopted by ECOP. In an assessment of national trends, the Task Force identified five topic areas that are included in the Framework: chronic disease prevention and management, health in all policies, health insurance literacy, health literacy, and positive youth development for health. Upon adoption of the Framework, Action Teams in each of these five areas were formed. This article focuses on the activities of the Health Literacy Action Team, comprised of research and Extension professionals from across the nation.

## Health Literacy

It is important to recognize that literacy and health literacy are not the same. Literacy is a person's ability to read and write. It is often referred to as basic or fundamental literacy as it helps individuals to participate fully in their community and wider society (Zarcadoolas, Pleasant, & Greer, 2006).

Individuals navigating the nation's health care system can be overwhelmed when they lack the necessary skills. "Health literacy" is the term used to include all the skills that, when used, enable individuals to act on information and live healthier lives (Centre for Literacy, 2011). Required skills include reading, writing, listening, speaking, numeracy, and critical analysis.

Typically, health literacy is used when referring to an individual's ability to understand information in print form. However, it is recognized that other forms of delivery may impact one's health literacy, such as communications provided verbally and visually or information delivered through the media and accessed electronically (U.S. Department of Health and Human Services [USHHS], 2006).

Health literacy goes beyond the individual. It also depends upon the skills, preferences, and expectations of health information and care providers, including doctors, nurses, administrators, home health workers, the media, and many others (Centers for Disease Control and Prevention [CDC], 2016). Moreover, health literacy is influenced by an individual's cultural and social

background, as well as interactions with health systems (Johnson, 2013). All of these factors and others contribute to an individual's health outcomes and the associated costs.

A 2003 National Assessment of Adult Literacy (National Center for Education Statistics, 2006) reported on the health literacy of more than 19,000 adults (aged 16 and older) using a health literacy scale with four levels: Below Basic, Basic, Intermediate, and Proficient. In a self-assessment of overall health, adults in the "Below Basic" health literacy level reported their health as poor (42%) and reported a lack of health insurance (28%). By comparison, of those rated as "Proficient" on the health literacy level, 3% reported their health as poor and 7% reported a lack of health insurance. Additionally, tested adults receiving Medicare and Medicaid had "Below Basic" health literacy levels (27% and 30%, respectively). The national assessment found that "nearly nine out of ten adults may lack the skills needed to manage their health and prevent disease" (U.S. Department of Health and Human Services [USHHS], n.d.).

Populations most likely to experience low health literacy are older adults, racial and ethnic minorities, those with less than a high school degree or GED (General Equivalency Diploma), those with low income, non-native speakers of English, and people with compromised health status (USHHS, n.d.). Education, language, culture, access to resources, and age are also factors that affect an individual's health literacy skills.

### **Strategies and Process**

In 2014, when the Action Teams were formed, Extension had no recognized formal role within the national health care model, although Extension had provided health-related programs and information for more than a century. Therefore, there was no historical reference or guidelines to direct the Health Literacy Action Team efforts. There was an understanding that, at the end of the three-year period, all the Action Teams would offer some ideas for programs or projects that could be submitted for funding at the national level. The national ECOP Steering Committee charged all teams to:

- invite partners both internal and external to Extension as needed for maximum effectiveness,
- identify and develop systematic programs and curricula,
- engage colleagues in professional development, and
- assist with resource development.

### **Develop a Working Definition of Health Literacy**

The majority of the Health Literacy Action Team members were unfamiliar with the Health Literacy topic area. Therefore, the first order of business was to find a working definition. The World Health Organization's (World Health Organization [WHO], 1998) definition laid the

responsibility of health literacy “within the motivation and ability of individuals to gain access and use information” (p. 10). As team members dug deeper into the issue, they discovered the WHO definition had been expanded upon by others and evolved to better encompass how health literacy is a component of the entire health care system.

The Calgary Charter on Health Literacy (2011) used a wider lens in defining health literacy, “Health literacy allows the public and personnel working in all health-related contexts to find, understand, evaluate, communicate, and use information.” Team members adopted this definition as more health care institutions are recognizing that the responsibility of improving health literacy lies not only with individuals but with all facets of the health care system such as pharmaceuticals, medical professionals, clinicians, health educators, the media and many others (Boulos, M. N. K., 2012; GB HealthWatch, 2018; USHHS, n.d.).

### **Identify Resources (Partners, Programs, and Curricula)**

In the first year, Health Literacy Action Team members researched available resources in order to assess any gaps that might be addressed by Extension programs and curriculum. A spreadsheet database was created to capture information that might be of value as the team activities moved forward. The spreadsheet contained contact information for individuals identified by team members as being active and/or interested in health literacy. This included Extension health specialists, those working in private medical practice, university health educators, and public health professionals, among others.

In addition to listing partners, the spreadsheet identified health literacy programs and curricula; Extension delivered evidence-based programs that incorporated health literacy (e.g., chronic disease self-management educational programs, and Dining with Diabetes); publications; and links to institutions offering resources, toolkits, certification courses, and/or basic health literacy online tutorials. Fourteen major health literacy programs and curricula were identified through this research.

### **Engage Colleagues in Professional Development**

At the same time as the Action Team members were conducting their research to identify resources, they also engaged colleagues in professional development to raise awareness of health literacy. At the national level, presentations were provided both within and outside Extension. Over a two-year period, activities included:

**Webinars.** “Understanding Health Literacy” presentations were hosted by eXtension (an online Extension resource), the American Association of Family and Consumer Sciences (AAFCS), and the National Extension Association of Family & Consumer Sciences (NEAFCS).

**Oral presentations.** Team members were invited speakers at national conferences (e.g., Epsilon Sigma Phi, Joint Council of Extension Professionals (JCEP), NEAFCS, the National Health Outreach Conference (NHOC), and health literacy conferences). A number of oral presentations conducted at the state and local levels involved departments of health, community health councils, university faculty, and health care professionals.

Based on the concept that education is enhanced through shared dialogue (Madron, 2008), the team members created polling questions to increase understanding in the concept of health literacy. These polling questions were integrated into the webinars and oral presentations. An example of a discussion scenario, polling questions, and discussions follows:

A 75-year old woman taking medication for hypertension began experiencing dizziness and nausea. She went to the Emergency Room where a doctor prescribed her another blood pressure pill. The woman had the medication filled and followed the doctor's directions for taking the medication. After three days, she was back in the Emergency Room.

Polling Question: What do you think happened?

- A. She took too much medication.
- B. She had a reaction to the medication.
- C. She only took one blood pressure pill and not the other.
- D. She wanted some attention.

Following group discussion, an explanation was provided by the Action Team: The doctor did not explain to the woman to take this new pill **in addition to** continuing her other blood pressure pill. She thought that since it was a "new" pill, she did not need to take the "old" pill.

Polling Question: Who is to blame for the mix up?

Responses that came out of the group discussion:

- The doctor for not explaining in greater detail.
- The patient for not asking if this is in addition to or replacing the other pill.

**Health Literacy tri-fold informational brochure.** An informational brochure was created to help raise awareness of the National Cooperative Extension's Framework for Health and Wellness and, specifically, health literacy. The brochure included the health literacy definition, descriptions on why health literacy is important, and how Extension is working to reach the

public through educational efforts focused on increasing health literacy. Team members' contact information were listed for those interested in sharing curricula, programs, and/or resources. The brochure was disseminated at conferences, presentations, poster sessions, health fairs, community events, and other venues.

### **Provide Assistance with Resource Development**

After the first year of working together, the Health Literacy Action Team determined that the majority of available resources were written from a clinical perspective. Extension agents, educators, and community volunteers often do not come from a clinical, medical, or public health background. Therefore, the Action Team identified a need for resources that were more relevant for Extension professionals and others delivering programs in informal educational settings. The Action Team members wrote in an email message to the national ECOP Steering Committee (2016):

The Health Literacy (HL) Action Team members are exploring the possibility of developing a HL toolkit. There are resources currently available from the Centers for Disease Control and Prevention, and the Institute for Health Advancement. However, the team's impression is that these resources were developed more for those working within clinical settings. The proposed toolkit would better serve Extension educators and community volunteers who provide educational programs in informal settings such as community events. Guidelines available in the toolkit will be valuable when revising existing and/or developing new health-related messaging documents. After visiting with a few individuals serving in this capacity, the idea was met with much enthusiasm.

As the team continued identifying programs, they learned more about health literacy and types of training materials offered to the public. A team member shared an online course focused on health literacy and communications offered through Coursea, an Internet platform for online courses developed and offered by faculty from universities across the country that can be taken for college credit, certification, and professional development. With funding from the national ECOP Steering Committee, the Health Literacy Action Team members completed the 8-week online "Health Literacy and Communication for Health Professionals" Coursera course (<https://www.coursera.org/learn/health-literacy>), earning certificates of completion. The Coursera course was designed for public health professionals. So, while the information was educational, not all of it seemed conducive to community, informal programming.

The Action Team began considering a health literacy certificate course for Extension professionals, with the thinking that it could be released to the public at a later date. Through a member of the Steering Committee, the Action Team presented its idea to the director of the Horowitz Center for Health Literacy at the University of Maryland. The director accepted the



invitation to serve as an expert and resource for the development of the course. Unfortunately, all Action Teams were disbanded in 2017. Therefore, while there are individuals who remain interested in the concept, the health literacy certificate course has not yet made any progress.

### **Results and Impacts**

Since its inception, the Health Literacy Action Team worked to raise awareness of health literacy, both within and outside Cooperative Extension, at the national level with the expectation of integrating health literacy into program areas and curricula. Participants attending the webinars and oral conference presentations presented by Action Team members provided feedback that was used to direct team activities in meeting the national ECOP Action Team goals that were listed in the Strategies and Process section of this article.

Using a Likert-type scale to measure participants' perceptions as to the importance of health literacy following oral presentations at two national conferences (i.e., NEAFCS and NHOC), results indicated that 78% of the respondents viewed health literacy as an important topic. When asked specifically about the importance of health literacy in Extension programming, 82% of the respondents believed it was important for Extension to address the topic.

Participants indicated ways they planned to use the presented health literacy information:

- Use more visuals in teaching lessons as a way to reach people with varying levels of health literacy.
- Enhance the reading comprehension on written materials.
- Consider audience literacy levels when creating handouts.
- Integrate health literacy guidelines when creating educational materials.
- Integrate into current work with a community coalition on Health Literacy to raise our county health ranking.

One individual can also make a difference. In her home state, a team member presented on Extension's role in health literacy to that state's Department of Health Chronic Disease Prevention Council Subcommittee. This led to a discussion and a small group of professionals forming a state Health Literacy Coalition. The founding members of the Coalition included:

- Department of Health Medical Director,
- Department of Health Promotion Coordinator,
- Extension Health Specialist (Action Team member),
- Health Literacy Specialist (private business),
- Medical Professional Advocate,
- Office of Health Equity Director,

- Office of Health Equity Outreach Coordinator, and
- University Medical Center Health Literacy Specialist.

Members of the Coalition determined that, in addressing social determinants of health, the state should include a health literacy component. As no activity in this area was evident, the Coalition is working towards a “health in all policies” approach to integrating health literacy into the state’s public policy. As the Coalition moves forward, more key partners will be invited to support the work of integrating health literacy for addressing health disparities.

### **Implications**

Based on the experiences of the Health Literacy Action Team, it was determined that Extension professionals and educators view the topic of health literacy as very important to their work and feel it needs to be addressed in their programming. Accordingly, Extension professionals are encouraged to develop health literacy skills by way of educational programs offered in their communities or electronically. There are a number of excellent resources available that range from no cost to a nominal fee. Most notably are the resources available from the National Institutes of Health (NIH) Clear Communication website (NIH, 2017) and the Centers for Disease Control and Prevention (CDC) Health Literacy website (CDC, 2016). Certificates, often awarded upon completion of the educational modules, can be used to demonstrate knowledge in this area.

Health literacy coalitions created and/or supported at the campus level can offer practical training and easy to use methodology to enhance the oral and written communication skills of Extension professionals. The coalition members could include Extension health specialists, university health sciences teaching faculty, medical center teaching faculty, community volunteers from diverse populations, and media specialists, among others. Available at no cost are existing resources, (e.g., NIH and CDC) that can be used in setting up a program with tools easily modified to meet the needs of the educators.

Currently, the majority of health literacy educational modules and training programs are geared toward professionals in clinical settings. As Extension agents, program educators, and volunteers often do not have expertise in health sciences, their professional development needs are similar to but vary from the health literacy skills required in health care systems. Health literacy coalition members should be sensitive to the needs of Extension professionals, community health workers, *promotores*, and trained volunteers who are delivering health-related programs in informal settings.

Extension professionals are encouraged to work with the eXtension Creating Healthy Communities Community of Practice (CoP) to create a Health Literacy Subcommittee. The CoP

membership is comprised of health and wellness state Extension specialists, county Family and Consumer Sciences agents, program educators/coordinators, and other Extension faculty and staff. The Health Literacy subcommittee can offer continuing education and professional development through national webinars that are archived on the eXtension website. Further, for those interested in developing and offering the health literacy certificate course, the eXtension webinars might serve as a starting point for course content and could help in creating a system-wide approach for delivery.

Extension agents and educators using evidence-based programs and curricula developed by other institutions need to assess their applicability for use with the targeted audiences of their programs. In some instances, it may be prudent to pilot test program(s) with select audiences before offering it to the general public. In doing so, revisions can be made to ensure the program meets the needs and the health literacy levels of the intended audience.

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# **Organizational Readiness to Engage in Policy, System, and Environment Changes Supporting Positive Youth Development for Health: Case Studies from the Cooperative Extension System Framed by the Transtheoretical Model**

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*Cooperative Extension's National Framework for Health and Wellness identified Positive Youth Development for Health (PYDH) outcomes at the individual (education) and community (policy, system, and environment) change levels, calling on Extension professionals to integrate public health principles into youth development programs. However, Extension professionals may not be equipped to effectively incorporate these principles and related strategies in the youth development context. An assessment of Extension professionals' readiness to integrate public health approaches, such as community-level change strategies, with youth program efforts suggests these professionals may lack knowledge of practical steps for including policy, system, and environment change methodology into their daily work. Recommendations framed by the transtheoretical model (TTM) to guide Extension in advancing readiness among Extension educators at the organizational level have been developed. However, context-specific examples that illustrate such approaches and show how they fit within youth*

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*development programs are lacking. This article provides concrete case examples from the Extension system illustrating readiness levels at each TTM stage. Associated recommendations and implications for supporting youth development programs to effectively engage in influencing multilevel change strategies are also provided.*

**Keywords:** transtheoretical model; socio-ecological model; Cooperative Extension; Extension; youth development; policy, system, and environment change; multilevel change; positive youth development for health; Health and Wellness Framework; ECOP Action Teams

### **Introduction**

In 2014, Cooperative Extension's National Framework for Health and Wellness (Braun et al., 2014) set forth youth development objectives that called for Extension professionals to foster community change that supports healthy behaviors in addition to increasing individuals' knowledge and abilities to make healthy choices. Policy, system, and environment (PSE) changes are practical ways to target interventions across multiple levels of ecological models (McLeroy, Bibeau, Steckler, & Glanz, 1988), which illustrate how factors at various levels—individual, interpersonal, organizational, community, and policy—interact to influence behaviors.

Intentional efforts are needed to build organizational capacity for implementing multilevel changes that support youth health. As Extension professionals strive to meet the objectives in the health and wellness framework, they can use the transtheoretical model (TTM) (Prochaska & DiClemente, 1984) as a guide to examine both organizational and individual stages of change and change processes. Identifying organizational readiness using the TTM can help inform steps for advancing adoption of PSE change strategies. This article provides case examples to illustrate programs at various TTM stages along with recommended actions for advancing to subsequent stages.

### **Applying Public Health Approaches to Youth Development**

Youth development experts recommend that positive youth development principles should be considered when planning and implementing health policies, programs, and services (Pittman, Martin, & Yohalem, 2006; Tepper & Roebuck, 2006). Integration of public health principles into Extension programming and other youth development efforts is also recommended as a strategy to reduce risky behaviors and promote healthier alternatives (Besenyi et al., 2014; Brownell, Schwartz, Puhl, Henderson, & Harris, 2009; Fitzgerald & Spaccarotella, 2009). Positive Youth Development for Health (PYDH) is one of six strategic program priorities

included in Extension's National Health and Wellness Framework (Braun et al., 2014), which aims to increase the number of Americans who are healthy at every stage of life. The PYDH strategic program priority area focuses on conditions and actions that support young people's development into competent, caring, and contributing adults while experiencing physical, social, and emotional well-being. The National Framework's logic model specifies two outcome indicators for PYDH (Braun et al., 2014, p. 14):

- PYDH Outcome Indicator #1: Knowledge, ability, and confidence to make healthy choices, leading to individuals and families who demonstrate healthy behaviors.
- PYDH Outcome Indicator #2: Individuals empowered to lead community change, resulting in communities that support healthy lifestyles.

As such, the National Framework is a call to action for Extension professionals to leverage their role as a trusted community resource for youth education in order to support broader population-level change.

The Centers for Disease Control and Prevention's (CDC) socio-ecological model (SEM; CDC, 2010) (Figure 1) offers a useful context for planning effective interventions that create healthier environments and achieve measurable success in the PYDH outcome indicators. The SEM's core tenet is that behaviors and choices are formed through complex interactions of multiple levels of individual and environmental influences: knowledge, attitudes, beliefs, and personality traits at the individual level; social identity and support provided by friends, family, and peers at the interpersonal level; practices and procedures at the organizational level; social networks, norms, and standards at the community level; and local, state, and federal policies and laws at the public policy level (Sallis et al., 2006; Sallis & Glanz, 2009; Sallis & Owen, 2015). Interventions targeting multiple levels of influence across the SEM are recommended to most effectively change behaviors (Sallis et al., 2006; Smathers & Lobb, 2014).

Applying the SEM can help practitioners recognize opportunities where PSE change can enhance Extension youth development program outcomes. For example, a survey of 161 4-H club leaders in one state showed that the majority of clubs were neither allowing time for physical activity nor serving healthy foods and beverages during club meetings (Riemenschneider & Ferrari, 2017). In this situation, education targeting the individual level of the SEM with knowledge and skill building activities may be offered, but appropriate options are not made available to participants. Opportunities for Extension professionals to target multiple levels of the SEM and enhance program outcomes could include modeling healthy behaviors at club meetings (interpersonal), establishing club guidelines for healthy food and physical activity (organizational), offering healthy foods and physical activity at community events (community), and advocating for local, state, and national policies that support healthy behaviors for youth (policy).

**Figure 1. Socio-Ecological Model**

(Source: CDC, 2010)

Although multilevel interventions can be complex and challenging to evaluate, evidence supporting their use in health behavior promotion and risk prevention activities continues to grow (Brownson & Haire-Joshu, 2006; Capewell, & Capewell, 2017; Han, Lawlor, & Kimm, 2010). National Institutes of Health collaborators concluded that carefully planned and executed multilevel interventions hold promise for reducing obesity in vulnerable populations (Stevens et al., 2017). An evaluation of Shaping Healthy Choices, a multicomponent, school-based obesity prevention intervention, found that reinforcing messages at multiple points of influence could positively affect student body mass index in one school year (Scherr et al., 2017).

With an emphasis on making healthy choices attractive, accessible, and acceptable, the public health construct of PSE change has emerged as a useful basis for positive youth development efforts and Extension programming intended to encourage positive health behaviors (Besenyi et al., 2014; Brownell et al., 2009; Fitzgerald & Spaccarotella, 2009). By shaping laws and guidelines as well as social and physical environments, PSE change efforts support and encourage healthy choices by ensuring that healthy options are increasingly desirable, available, and easily obtainable (Ohio Wellness and Prevention Network, 2012). Rigorous outcome evaluations, such as those in the CDC's (1999) Framework for Program Evaluation in Public Health, suggest PSE changes will lead to improved healthful behaviors (Honeycutt et al., 2015).

Leatherman and McCune (2016) point to shifts in 4-H Youth Development programming away from a traditional focus on educational activities and practice of rewarding professionals for the numbers of individuals reached. Although still predominantly centered on education and curricula success, the list of accomplishments in the 4-H Healthy Living Program National Report 2016 (Leatherman & McCune, 2016) included completing the National 4-H Professional



and Volunteer Development Needs Assessment, creating a 4-H Healthy Events Checklist, and administering a National 4-H Environmental Scan and Evaluability Study. While these accomplishments provide 4-H Professionals with tools needed to move towards a PSE approach, they are not evidence of system-wide programmatic change to engage in multilevel strategies.

As the Extension paradigm shifts, Extension faculty, program staff, and volunteers may need additional knowledge, skills, and resources to support changes to social and physical environments that contribute to good health for youth. For example, one study found that Extension professionals lacked a basic understanding of PSE change (Smathers & Lobb, 2015). Without such an understanding, Extension professionals' implementation of change strategies will be difficult. Among the professional development needs identified by 150 Extension professionals surveyed in the National 4-H Professional and Volunteer Development Needs Assessment were social-emotional health competencies, funding and time resources, and staff and volunteer development (Donaldson, Franck, Toman, & Moody, 2014). Addressing these needs will require both professional development and resource reallocation.

### **Readiness Assessment**

To take a closer look at Extension professionals' readiness to integrate PSE change strategies into youth program efforts, the PYDH Action Team, a national work group comprised of youth development experts assembled to guide implementation of the National Framework's PYDH objectives, developed and conducted a readiness assessment. The Institutional Review Board at the University of Delaware approved the study.

The researchers developed survey questions based on a review of literature and feedback from teams of additional experts. In October 2016, using a chain sampling approach, a survey link was disseminated through existing Extension email lists and newsletters. The survey research methodology is fully described in Smathers et al. (2018).

A total of 379 Extension faculty and staff in a range of program areas from 38 states responded to the survey. Nearly all respondents (92%) indicated they are likely to work with youth within the coming year through an Extension-related program. Respondents reported a limited level of understanding of PSE change, with only one-quarter (25%) indicating a strong understanding of the concept through their response selections of 8 or higher on a 1–10 point scale (10 = highest).

Using a 4-level scale (strongly agree, somewhat agree, somewhat disagree, strongly disagree), just over half of the respondents (52%) somewhat or strongly agreed that they would be comfortable if their supervisor asked them to develop a PSE change plan. A slight majority (55%) strongly or somewhat agreed that PSE change work would represent a "big shift" in their work. Most respondents (80%) indicated a strong willingness to do PSE change work, while a

majority (82%) also strongly or somewhat agreed that educating the community is the most important part of their job. Over two-thirds (69%) agreed that “the way to make change in the world is to change policy,” which indicated that respondents valued PSE change as an effective approach. About one-third (38%) indicated they considered PSE change work to be a fad (ECOP/ESCOP Health Implementation Teams, 2017).

### Transtheoretical Model

The range of perceived readiness levels among Extension professionals documented by the 2016 readiness assessment suggests that an approach for advancing capacity is warranted, regardless of the current situation within an organization. The TTM (Prochaska & DiClemente, 1984) may be a useful tool to help Extension professionals examine organizational and individual change and to advance adoption of PSE change strategies. The TTM (Table 1) consists of five stages identified as precontemplation, contemplation, preparation, action, and maintenance.

Ten process of change activities support progress through the TTM’s five stages. Process of change activities and progression through the five stages occur within the context of decisional balance (weighing the pros and cons of change), self-efficacy (confidence in ability to avoid relapse), and temptation (the urge to engage in old behaviors) (Prochaska & Velicer, 1997).

**Table 1. Transtheoretical Model Constructs (Based on Prochaska & Velicer, 1997)**

Stages of Change	Description	Processes of Change Activities to Move Through Stages
Precontemplation	No intention to act within the next six months; may be uninformed or under-informed about the consequences of the behavior; may have tried and are discouraged	Consciousness raising Dramatic relief Environmental reevaluation Social liberation
Contemplation	Intends to act within the next six months; aware of the pros and the cons of changing; may be ambivalent	Self-reevaluation
Preparation	Intends to act within the next 30 days and has taken some behavioral steps in this direction	Self-liberation
Action	Made specific, overt modifications of lifestyle within the past six months; action is observable	Counter-conditioning Helping relationships Contingency management Stimulus control
Maintenance	Changed overt behavior for more than six months; less tempted to relapse and are increasingly more confident that they can continue their change	

Following are descriptions of characteristics and scenarios that provide context-specific examples of readiness at each stage of change.

### **Examples of Extension's Readiness Using the Transtheoretical Model**

#### **Precontemplation**

**Description.** Precontemplation is characterized by denial, fear, and lack of confidence in the ability to change, with no intent to change behaviors or practices in the next six months (Prochaska & Velicer, 1997). Extension professionals and organizations in precontemplation may be unaware that change is needed or fear that change will have a negative impact on their work. The processes of change most frequently associated with precontemplation include consciousness raising, dramatic relief, and environmental reevaluation. Consciousness raising increases awareness about the causes of and consequences for problem behaviors. Dramatic relief involves producing experiences (e.g., testimonies, awards) that attract others to changes and actions that improve health. Environmental reevaluation is a cognitive and affective assessment of how a behavior establishes an individual as either a positive or a negative role model (Prochaska & Velicer, 1997).

**Background.** Idaho is consistently among the states with the highest suicide rates. According to the Idaho Department of Health and Welfare (2017), in 2015, Idaho had the fifth highest suicide rate in the U.S., which was 57% higher than the national average. Suicide is the second leading cause of death for Idahoans age 15 to 34 years. Between 2012 and 2016, 105 youth (age 6 to 18 years) died of suicide. A quarter of these youth were 14 years or younger. Based on the 2015 Idaho Youth Risk Behavior Survey (Idaho State Department of Education, 2015), 32% of high school students felt sad or hopeless for two or more weeks; 20% seriously considered attempting suicide; 17% made a plan about how they would attempt; and 10% attempted suicide. Sadly, between autumn 2015 and spring 2016, four Idaho 4-H youth completed suicide.

The Idaho State Office of Suicide Prevention was established in 2016 to help implement a comprehensive Idaho Suicide Prevention Plan (ISPP). The ISPP focuses on youth education, a suicide hotline, and a public awareness campaign. However, Idaho 4-H at that time had not fully connected with external organizations, including the ISPP. 4-H professionals may have been unaware of the role they could play in suicide prevention and lacked the confidence to move toward engagement. This situation suggests that Idaho 4-H Youth Development was at the precontemplation stage of engaging in a statewide suicide prevention effort.

**What happened?** Following the death of a 4-H youth, Idaho 4-H sponsored five evidence-based trainings for 4-H and other youth professionals to help them recognize and respond to mental health crises in youth. From late 2016 through 2017, 87 individuals were trained. Nearly

half (41) were from University of Idaho (UI) Extension. To entice others to action, a promotional video was produced and shared through newsletters, social media, and emails.

**Important roles.** The Idaho Extension Director and 4-H Program Director supported the mental health crisis response trainings by providing partial funding and encouraging Extension professionals' participation. The trainings were taught by certified instructors from outside Extension. An Area Extension Educator promoted and facilitated each of the trainings. County-based Extension educators and 4-H staff were encouraged to invite their community partners.

**Barriers/challenges.** The youth mental health focus of the Idaho 4-H healthy living plan began as a state level directive in response to Idaho's high rate of attempted and completed suicides. However, a formal assessment of Extension's readiness to address the topic was not conducted. Idaho 4-H is a decentralized system with county-based 4-H professionals operating unique programs with selective collaboration within regions and state-based programs. Because the trainings were not county driven, several challenges evolved. Extension professionals did not fully understand the role they could play in addressing youth mental health; thus, they were apprehensive about committing time and recruiting community partners.

**Application.** To move forward, Extension professionals and programs in precontemplation can raise awareness and understanding of the benefits of PSE change and provide concrete examples of successful programs. Environmental reevaluation may involve taking an honest look at whether Extension practices portray the organization as a positive or negative role model. In this case study, participants increased their understanding of youth mental health (consciousness raising) through training. They reduced anxiety and concern as mental health advocates (dramatic relief), thus decreasing the stigma of suicide, and are now better prepared to be inclusive of mental health awareness in healthy living action planning (environmental reevaluation). By supporting mental health crisis response training, 4-H is positioned to continue partnerships and acquire resources through the Office of Suicide Prevention, while also stepping back to assess county-based needs.

## Contemplation

**Description.** Individuals and organizations in contemplation intend to change in the next six months if they estimate that the benefits outweigh the costs of change (Prochaska & Velicer, 1997). Individuals and organizations progressing from precontemplation through contemplation may use self-reevaluation, consciousness raising, dramatic relief, and/or environmental reevaluation. Self-reevaluation is a reflection of how people see themselves. It entails a cognitive and affective assessment of one's work (Prochaska & Velicer, 1997). In Extension, that might be whether the professional's role in PYDH is that of an educator or as being both an educator and an advocate for community-level change.

**Background.** According to national health rankings, Cherokee County ranked among the six worst counties in Kansas for health outcomes due to high physical inactivity, low access to exercise opportunities and healthy food, and high food insecurity (County Health Rankings & Roadmaps, 2017). A multilevel approach, including PSE change, was necessary to address these community-wide issues.

Following staffing turnovers in 2015, Cherokee County Extension decision makers hired three Extension professionals to fill those positions. These Extension professionals aimed to address county health outcomes by reforming youth, family, and community programs through joint data-driven planning, implementation, and marketing. This new team was encouraged to emphasize team planning and collaboration across 4-H, Family and Consumer Sciences (FCS), Agriculture and Natural Resources (Ag/NR), and Community Development programming.

**What happened?** Cherokee County Extension became a comparison site in a multistate food access/health project. The two-year project involved tracking health outcomes for the first year and then implementing PSE strategies the following year. A first effort was to expand a 4-H horticulture project centered on growing tomatoes. The Extension professionals were able to broaden the project's program policies and systems so that youth who were not 4-H members could also participate. This policy shift energized other 4-H projects, increased 4-H membership by 12%, and garnered a state award for best practices and innovation.

Cherokee County Extension's increased awareness of the county's health problems and concerns for the community's youth motivated Extension professionals to work together to plan, implement, and market interdisciplinary Extension health programs. Through outcome-driven programming that emphasized access to locally grown, healthy food, more youth and families joined 4-H; additional funding was secured; more partnerships were established between Extension, schools, businesses, and public health; and changes in Extension programming policies and systems showed how small-scale efforts could improve community health. The county Extension professionals were recognized by the state's Extension system for identifying community needs, implementing PSE change strategies, and expanding local health and wellness coalition education programs. They have inspired others across Kansas to consider doing the same. In early 2017, the Kansas Extension system also modified its annual performance review document to recognize and reward involvement in community collaborations, partnerships and coalitions.

**Important roles.** County Extension decision makers, including Extension Board members, provided the essential resources and support that Extension professionals needed to begin contemplating new ways to address the county's health. This support was essential to the success of efforts to build health collaborations between the three 4-H, FCS, and Ag/NR Extension professionals in Cherokee County.

**Barriers/challenges.** Initially, there was hesitancy to share planning, programming, marketing, successes, and (potential) failures across Extension content areas. Extension professionals, supported by Extension Board members, worked together on PSE approaches that were data-driven and acknowledged the unique talents and knowledge of each individual to support self-reevaluation and to raise awareness.

**Application.** Building a peer support network of early adopters (Rogers, 1962), identifying effective internal and external motivators, and addressing institutional barriers such as workload and lack of administrative support can help organizations in contemplation progress. In this stage, it is important to provide resources and support for adopters and find ways to systematically align current reward systems with the desired public health approaches. However, a lack of motivation, information, or skills; an inadequate reward system; or a perceived conflict between PSE change and traditional approaches could slow Extension's progress toward PSE change. Cherokee County leveraged data to motivate bold decisions (consciousness raising). The hiring of new staff and implementation of new programs and new policies (dramatic relief) led to new strategies and innovations that inspired others towards PSE implementation. Public recognition, awards, and changes to the Kansas Extension system's annual review process provided internal and external motivators for growth in professional programming and personal health (self-reevaluation).

## Preparation

**Description.** In the preparation stage, initial steps have been taken, a plan of action is in place, and change is anticipated within the next month, but individuals and organizations may face a real or perceived lack of support for the change at both the organizational and community levels. Self-liberation, characterized by the belief in one's ability to change and a commitment to action, is a new process of change often employed in this stage (Prochaska & Velicer, 1997).

**Background.** Rates of childhood obesity and food insecurity in Arkansas are among the highest in the nation (Segal, Rayburn, & Beck, 2017). As a predominantly rural state, social life of residents often revolves around community institutions and clubs. Food is usually present and expected at meetings and events, including regular 4-H club meetings and county youth development events. Despite availability of nutrition education, few counties had healthy meeting guidelines for food provided at club or countywide meetings. Based on author observations while serving as a county Extension agent, cookies, chips, snack cakes, and sugary beverages were typical fare at Arkansas 4-H meetings. Frequently, as the lead organizers of county-level 4-H meetings and providers of refreshments, Extension professionals struggled to model and provide environmental supports for the habits promoted through Extension's educational programs.

**What happened?** The Healthy Meeting Challenge (HMC) encouraged 4-H clubs in Arkansas to provide healthier snack and beverage options and physical activity opportunities at monthly meetings. Originally developed by Tufts University, the nationally recognized “4th H for Health Challenge” curriculum (Tufts University Friedman School, 2017) was reviewed by a panel of county educators and adapted for the HMC by University of Arkansas Extension faculty. Educators attending a statewide in-service training were introduced to the HMC in December 2015, but rollout was delayed until the following 4-H year, which started in October of 2016. County educators were asked to promote HMC participation to their clubs and were provided marketing materials, including an electronic flier and social media posts.

Participating clubs reported their meeting activities and earned points for a variety of healthy practices in the club setting. Clubs earning the most points were recognized at regional competitions. The HMC operated from the state level, but the program’s coordinators relied on local county Extension agents to promote participation and provide assistance with HMC enrollment, which required registration using a web-based system. The first round of HMC ran from December 2016 through May 2017. The initial round of HMC participation represents preparation-stage actions at the county level. State level coordinators, anxious to initiate the HMC before losing another program year, took action, but did so before most county educators fully bought into the effort.

Of 75 Arkansas counties, 18 (24%) had clubs ( $n = 45$ ) participate in the HMC during the initial round of the program. The highest scoring teams received awards at regional competitions. Although some county agents expressed a desire for adopting guidelines, wide adoption of healthy meeting guidelines has been sparse. Among the participating counties, only three reported using such guidelines.

**Important roles.** In counties with participating clubs, the local county Extension agent played a key role in promoting HMC involvement to adult leaders and 4-H youth. Buy-in at this level was critical to secure a club’s participation. As the local point of contact for 4-H, the agent determined whether information about the HMC and encouragement to participate were communicated to the club level.

**Barriers/challenges.** Existing organizational structures presented communication barriers. The HMC had a centralized enrollment and reporting system that functioned within a decentralized 4-H program coordination structure through county offices. HMC information was sent from the state level to agents for distribution to clubs. In most counties, the agent and county office are the conduit through which information from the state level reaches 4-H youth and adult volunteer leaders in the county. If counties or agents were not interested in participating in the HMC or felt they did not have time to adopt for local use, information may not have been shared with clubs or 4-H volunteer leaders.

**Application.** Extension professionals and organizations in preparation need support to set goals for the ongoing integration of PSE change into their work. It is important that the organizational administration clearly communicates support for PSE work and provides training and mentoring for new Extension professionals in these public health-based approaches. Promoting healthier foods at 4-H meetings from the state level alone is not sufficient. PSE change requires buy-in at multiple organizational levels. While few counties implemented written meeting guidelines, many agents indicated they encouraged adult leaders to provide healthier options and expressed a desire for guidelines in their counties (environmental reevaluation). Feedback suggests some in this group may be primed to take action if provided additional supports, which might include sample guidelines for adoption and the endorsement of guidelines by those at administrative levels. This example emphasizes the importance of progressing through the stages of change sequentially. Rushing the county level through preparation to action did not produce the desired outcomes (self-liberation). Many counties remain in the preparation stage, while others are still in contemplation, despite promotion of healthy meetings from the state level.

### Action

**Description.** The action stage occurs when individuals and organizations engage in new behaviors that have been in place for less than six months. Counterconditioning, stimulus control, contingency management, and healthy relationships are process of change activities that appear during both this action stage and the maintenance stage (Prochaska & Velicer, 1997). The focus during this stage is to learn new behaviors, encourage and reward new behaviors, and build relationships that support the desired behavior.

**Background.** Kids Count Delaware 2015 reported childhood overweight and obesity rates for ages 2 to 17 at 39.4% for New Castle County, 40.3% for the City of Wilmington, 37.7% for Kent County, and 44.5% for Sussex County (Kids Count in Delaware, 2015).

FCS and 4-H Extension professionals in Delaware had historically worked separately and independently on healthy living program implementation. Since 2007, University of Delaware 4-H had been engaging teen Healthy Living Ambassadors (HLA) to deliver prevention and life skills education with adult 4-H professionals and volunteers to students ages 8 to 12 years. As childhood overweight and obesity rates continued to rise, recognition emerged that action and an organizational shift was required to better serve Delaware youth. With financial support from the Walmart Foundation, the Delaware 4-H and FCS programs used a youth-adult partnership model to educate younger youth about nutrition and fitness, while also training teens as HLAs.

**What happened?** A collaboration was formed between the Expanded Food and Nutrition Education Program (EFNEP) Extension staff, Supplemental Nutrition Assistance Program Education (SNAP-Ed) Extension staff, 4-H teens, and 4-H Extension professionals. The goal



was to address rising obesity rates by delivering statewide nutrition and fitness programming to younger youth through a partnership between SNAP-Ed and EFNEP staff and 4-H teen HLAs. SNAP-Ed and EFNEP staff were taught principles of positive youth and adult partnerships. 4-H teens were educated on SNAP-Ed and EFNEP curricula. Through this organizational change in program delivery, University of Delaware Extension professionals served new youth audiences with nutrition and fitness education, developed teens as teachers, and enhanced EFNEP and SNAP-Ed staff's understanding of positive youth and adult partnerships.

**Important roles.** Initially, the state Extension program leaders of 4-H and FCS, the 4-H grants manager, and one Extension professional from Food and Animal Science spearheaded the change to develop the collaboration, curriculum, and funding. By the end of the first summer, all EFNEP and SNAP-Ed staff had worked with teen educators. The training of the state's 11 FCS professionals as adult partners to youth changed the way the organization approached youth development. Prior to this collaboration, 4-H teen development was primarily the responsibility of 4-H professionals. Today, 4-H HLA's development is a collaborative responsibility.

**Barriers/challenges.** When the partnership was under development, some EFNEP staff expressed concern that the teens would be a burden rather than an asset. To address these concerns, 4-H conducted youth and adult partnership training, provided dressing for success training to the youth, and expanded communication among youth and adults using email, texts, and phone calls between partners prior to an assignment. Adult staff reported that by summer's end, most of the teens were able to facilitate sessions without the adult leading and that teen suggestions for program content and delivery were integrated into the program.

The data from the 2017 Kids Count Delaware showed significant reduction of childhood overweight and obesity rates for youth age 2 to 17 years in the two-year period coinciding with this effort (Kids Count in Delaware, 2017).

**Application.** During the Action stage, recognition and support can facilitate adoption of new PSE public health approaches. A lack of support and organizational barriers, whether real or perceived, are the primary impediments to maintaining these new behaviors and moving into the maintenance stage. While a few staff initially expressed concern around youth/adult partnerships and appeared to be in a precontemplation stage, most of the staff and 4-H and FCS leadership moved through contemplation and preparation prior to obtaining funds, propelling the team into action. Through training, the remaining staff moved from precontemplation into the action stage as summer began. By summer's end, the entire team accomplished an organizational shift of working closely together (helping relationships). Continuing 4-H and FCS staff collaboration enhanced effectiveness. The team received a regional award for excellence in teamwork in 2017 (contingency management).

## Maintenance

**Description.** The maintenance stage describes behaviors that have been in place for at least six months but less than five years. In maintenance, deliberate action has been taken and an organization is supporting modifications. The process of change activities in maintenance are similar to those in action (Prochaska & Velicer, 1997).

**Background.** The University of California (UC) 4-H club program is delivered at the local level by volunteers. As volunteers' reasons for participating in the program vary, so do their interests in and knowledge of health programming. Although the national and state level 4-H PYDH programs have identified healthy living as a program priority, this view may not be equally shared at the local level. Extension staff have struggled to gain buy-in from local volunteers in their responsibility for creating organizational change and implementing a healthful 4-H club environment. Recognizing that the availability of sugar-sweetened beverages (SSBs) and high calorie foods contributes to overweight and obesity rates (Park, Sappenfield, Huang, Sherry, & Bensyl, 2010), initial policy change efforts focused on this behavior.

**What happened?** In an effort to create healthier 4-H club environments with increased availability of water, the UC 4-H Healthy Living Leadership Team developed the UC 4-H Water Policy, which required that drinking water be available at all UC 4-H club meetings, events, and activities. To gain buy-in, the team took an approach that focused on the desired behavior as opposed to removing the unhealthy options. Since the inception of the UC 4-H water policy, the percentage of 4-H meetings and activities that had soda available decreased from 14.7% in 2014 to 13.2% in 2017, as reported by 4-H volunteers and members.

**Important roles.** In 2009, UC 4-H hired a dedicated staff member to coordinate the statewide Healthy Living efforts. This coordinator built the Healthy Living Leadership Team (HLLT), a team of Extension personnel, volunteers, and members that looked at how to improve the health of 4-H. The HLLT drafted the beverage policy and solicited 4-H volunteer and member feedback prior to seeking approval by the statewide Policy Committee. The HLLT developed the Water for Better Living campaign that drove ongoing state efforts and policy promotion.

**Barriers/challenges.** The 4-H HLLT draft Sugar-Sweetened Beverage Policy of 2012 required that water be available at all events; allowed only 100% juice, milk, noncaloric drinks, coffee, and tea and restricted regular soft drinks (sodas), sports drinks, energy drinks, vitamin waters, lemonade, punch, other fruit drinks, bottled tea, and coffee drinks. When the draft policy was presented to 4-H staff, adult volunteers, and members, it was met with some resistance. Some volunteers and staff viewed the original draft policy as restrictive and deemed oversight of such a policy as difficult and time consuming. In response to this feedback, the HLLT decided to amend the policy so SSBs were not limited, but the availability of drinking water was required.

**Application.** During the maintenance stage, individuals and organizations require support to overcome barriers and unanticipated changes. This organizational support is essential for successful long-term integration of PSE changes and public health approaches to PYDH efforts. The original UC 4-H Water Policy was drafted in 2012 and then approved in 2014. Availability of SSBs at 4-H clubs, meetings, activities, and events declined slightly during this time. While the policy itself had some impact, continued promotion of the benefits of the Water for Better Living campaign was also important (counterconditioning). Extension program leaders engaged in relationship-building activities with volunteers and youth involved in the development of the policy and policy promotion (helping relationships). UC 4-H found it particularly helpful to highlight success stories from the county programs, such as the advocacy, funding, and installation of water stations at a local school site (contingency management).

### Discussion

Braun et al. (2014) expressed that Extension “can do for the nation’s health what it did for American agriculture” and that “given the national trends in health...it is a critical time to create a new programmatic focus” (p. 2). They contend that Extension’s community presence and local credibility can influence social, economic, and environmental determinants of health (Braun et al., 2014). Achieving a culture throughout which health is a priority demands an all-encompassing community engagement effort that brings together targeted audiences to understand and apply science-based solutions to vexing local problems. It also calls for shared norms, expectations, knowledge, capacities, practices, and behaviors that support optimum health.

Meeting the Positive Youth Development for Health (PYDH) objectives of the Cooperative Extension's National Health and Wellness Framework (Braun et al., 2014) will require an added emphasis on policy, system, and environment (PSE) change strategies while also maintaining traditional approaches. Adjusting professional skill sets and priorities will take time. Extension professionals can use the TTM as a guide to examine both organizational and individual stages of change and change processes.

The case studies above demonstrate that just as Extension professionals utilize the TTM to assess readiness for change in their clients, the same model can help them assess their professional and organizational readiness to implement PSE strategies. Using the TTM to gauge organizational readiness can help provide guidance for the steps necessary for advancing readiness to adopt PSE change strategies. Through the lens of the TTM, Extension professionals can implement PSE strategies that foster partnership development and community engagement while supporting strong educational programs that focus on chronic disease and injury prevention; maternal, child, and family health promotion; farm safety; food safety; and financial wellness, to help protect, promote, and improve the community's health (Elliott & Coates, 2015). The benefit of using the

TTM, a behavior change model that may already be well known to some Extension professionals, is that it provides a familiar and understandable context.

The case studies provide evidence that multilevel change can and does happen in Extension. Successful efforts require time, strong partnerships, organizational champions, embracing new and expanded roles, and rewarding PSE efforts. Extension organizations will move through the stages of change at varying rates, as will individual Extension professionals. It is important to remember that even if an Extension organization is functioning in the action stage, for example, some Extension professionals in the organization may still be functioning at an earlier stage. Incorporating process of change activities that support these individuals is essential to the success of efforts to adopt multilevel programming and PSE approaches in the organization.

### **Implications for Practice**

Extension seeks to improve the lives of Americans through educating youth and adults about research-based information and recommended practices. Extension organizations are encouraged to “practice what they teach” and provide environments that support the recommendations to which Extension ascribes, especially in the areas of health and wellness (Smathers & Lobb, 2018). These areas might include such things as the Dietary Guidelines for Americans (U.S. Department of Health and Human Services and U.S. Department of Agriculture, 2015), beverage choices, physical activity, and obesity prevention.

In order to more effectively address population health through PSE implementation, as well as offer strategic educational programs, we recommend that Extension professionals need to also work with other networks and organizations and across jurisdictions. Extension organizations have a long history of providing effective, evidence-based PYDH programs. Public health organizations have a strong focus and expertise in population-based health improvement strategies such as PSE. Knowledge and use of PSE strategies can provide Extension professionals with a common language and a new set of tools to help them achieve the desired outcomes for the programs they design and facilitate. Extension professionals should explore opportunities to share and leverage resources and knowledge with public health organizations for greater impact of both Extension and public health efforts.

For this review, we applied the TTM to Extension PYDH efforts that have demonstrated some level of success in efforts to implement PSE changes. With the exception of Idaho, the case studies focused on food and beverage choices, physical activity, and obesity prevention. Much of the funding available to Extension organizations for PSE and multilevel interventions is directed toward these outcomes. Expanding PSE interventions to other youth health behaviors is also necessary, and therefore, Extension professionals are strongly encouraged to advocate for funding in additional PYDH focus areas.

Rigorous evaluation of PSE change strategies coupled with education is critically important for the success of Extension programming interventions. Public health tools, like the CDC's Framework for Program Evaluation in Public Health (CDC, 1999) can be helpful in evaluating these efforts. Extension organizations can add to this body of literature by collaborating with a college of public health to evaluate programs using this or other evidence-based evaluation frameworks.

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## **The National Framework for Health and Wellness: (Re)Framing the Work of Cooperative Extension for the Next Century**

**David Buys, Guest Editor**

*Mississippi State University*

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*Cooperative Extension is at a crossroads and has increasing opportunities to articulate its existing role and future growth in impacting the health and wellness of the individuals and communities it serves. This is important because the health outcomes in the U.S. are poorer than any other developed nation, health expenditures are high, challenges with navigating the health system are immense, and opportunities to intervene and remove barriers to improving the nation's health and wellness abound. This article provides suggestions as a follow-up to the reports featured in this special issue of the Journal of Human Sciences and Extension from the five Action Teams of the Extension Committee on Organization and Policy's (ECOP) Health Implementation Team. The authors present the idea that, to achieve greater impact in health and wellness, Cooperative Extension must also consider its role as translators of our history and how that history is relevant to health-related work, how we can engage with other health-related organizations, by embracing a partner perspective, and by submitting Extension's efforts to the review of other disciplines.*

**Keywords:** Cooperative Extension programs, Cooperative Extension, Extension, Health and Wellness Framework, ECOP Action Teams, health, public health, health care organizations, partnerships, scholarship, peer-review, publications

### **Introduction**

Cooperative Extension (Extension) is at a crossroads. Nationally, it has increasing opportunities to articulate its existing role and future growth related to its potential impact on the health and wellness of the individuals and communities it serves. In addition, increasing its work in the areas of health and wellness is important for Extension's sustainability, as the health concerns of the U.S. are growing as life expectancy is declining (Kochanek, Sherry, Murphy, Xu, & Arias, 2017).

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Health outcomes in the U.S. are poorer than any other developed nation, and expenditures are high (Schneider, Sarnak, Squires, Shah, & Doty, 2017). The articles in this special issue of the *Journal of Human Sciences and Extension* have provided a focused body of scholarship addressing Extension's increased and concerted efforts in the health arena, especially as it relates to addressing the immense challenges associated with staying healthy and navigating the health care system. Historical reference to the Cooperative Extension's National Framework for Health and Wellness (Braun et al., 2014) and its adoption by the Extension Committee on Organization and Policy (ECOP) is provided in the opening article of this special issue by authors Bonnie Braun and Michelle Rodgers. The five Action Teams that were organized following the adoption of the Framework have presented their work, and based on that work, have proposed ideas for Extension to move this national health and wellness initiative forward. Additional ideas that should undergird the efforts proposed by the Action Teams are presented here for thoughtful consideration.

### **A Way Forward for Extension in Health and Wellness**

Since its inception, the work of Cooperative Extension has been about supporting the health and wellness of the individuals and communities it serves. However, these efforts have not been conceptualized or described in terms of health and wellness until the last decade. This rise in the recognition of Extension's role in health and wellness by its own professionals is largely concurrent with recognition in the broader public health community that health promotion efforts should reach beyond traditional public health entities. Increasingly, Extension faculty and staff are being invited to the "table" of discussions about how to improve their communities' well-being. In essence, Extension has embraced this language to describe its role using more conventional health-terms as we have been invited to do so by those outside of our field. It is essential, then, that Extension professionals, from county and region-based faculty/staff to campus-based faculty and administrators embrace the role of translator, engage more health-related organizations, take on a partner perspective, and increase submission of Extension-based scholarship to fields outside of Extension.

### **The Role of Translator**

Extension professionals should take seriously the role of conveying and translating messages to partners outside of Extension. These messages may include, but are not limited to, the history of Extension, including the work of Agricultural agents to promote a safe and healthy food supply; the efforts of home demonstration agents, later home economists, and now Family and Consumer Sciences Extension agents to teach consumer food safety, nutrition, child development and family studies, healthy housing, and other matters that are clearly connected to health; and the efforts of 4-H Youth Development agents to teach and promote health to young people as the fourth "H" in 4-H. Extension is poised to grow partnerships to increase its impact in these

historical areas of influence. In addition, as the Health in All Policies Action Team articulated, Extension is well positioned to increase its influence in “upstream” work and policy, systems, and environmental interventions. Therefore, it is important that Extension be proactive with these efforts and consider what messages will resonate with its external partners.

### **Engaging with Health-related Organizations**

Extension is engaging more and more with health systems, including academic health systems, public and private hospitals, and other clinical partners to extend the work of those health systems to communities. Published accounts of these examples emanate from Kentucky (Scutchfield, Harris, Tanner, & Murray, 2007), New Mexico (Kaufman et al., 2017), and Michigan (Dwyer et al., 2017). Other states known to be engaged in this kind of work, but yet to publish on the partnerships, include Mississippi and Georgia. These health system partners recognize that Extension's historical reach into communities is unique, and that while some partners may have connection beyond their central office (such as to departments of health, human services, or child protective services), there are no other entities whose mission is exclusively education-focused as is Cooperative Extension's. As an entity, Extension has opportunities to foster these relationships and better market its reach into counties and parishes across the country.

### **A Partner Perspective**

As Extension engages with more partners in local communities, regions, statewide, and at a national level, it is essential that we move from a stakeholder mentality to a partner mentality. Merriam-Webster Dictionary (n.d.) defines stakeholder as “one who has a stake (an interest or share in an undertaking or enterprise) in an enterprise.” In the context of Extension, the idea of stakeholder as it relates to other entities like hospitals, departments of public health, and others may be misconstrued to suggest that these entities have something that benefits the Extension organization (e.g., funds, audiences, other resources).

A partner is defined by Merriam-Webster (n.d.) as “one associated with another especially in an action.” While not overtly stated in the definition, the idea of a partner implies that two entities have an egalitarian and synergistic relationship. In these partner relationships, particularly with health-related partners, we must consider how the financial costs can be neutral for all partners and how the mission, vision, and goals of participating organizations can be realized.

For instance, recently in Mississippi, a partner at the state's only academic medical center requested support of Extension agents in completing environmental assessments as part of a needs assessment for the partner's National Institutes of Health-supported grant project. In this relationship, the partner provided financial support for work by the Extension agents to conduct

the assessments and provide written reports about each community's neighborhood environment. As a result, the partner received the assistance needed at less cost than would have been required to hire other support, the Extension agents learned a new skill, the partner was able to meet the requirements of the grant, and the Extension agents now have reports (that they otherwise would not have had) to share with partners in their communities about how they can improve their neighborhood environments. These kinds of relationships are supportive of both entities.

An additional example is found in the case of one of the authors of this paper, who leveraged her role on her state's (New Mexico) Department of Health Chronic Disease Prevention Council Subcommittee to promote health literacy. This led to a discussion and then a small group of professionals forming a state Health Literacy Coalition. Founding members included:

- Department of Health Medical Director,
- Department of Health Promotion Coordinator,
- Extension Health Specialist (Action Team member),
- Health Literacy Specialist (private business),
- Medical Professional Advocate,
- Office of Health Equity Director,
- Office of Health Equity Outreach Coordinator, and
- University Medical Center Health Literacy Specialist.

The Coalition determined that in addressing social determinants of health, the state should include a health literacy component. As no activity in this area was evident, the Coalition is working towards a "health in all policies" approach to integrating health literacy into the state's public policy. The Coalition will continue to invite key partners to support the work of integrating health literacy for addressing health disparities. This kind of partnership includes multiple individuals from different entities, all with something to gain from the work of promoting a common vision, which in this case, is health literacy.

### **Submitting Scholarly Work to Professionals in Other Disciplines**

To increase Extension's credibility with external partners who have a longer and more in-depth history of working in health and wellness promotion, we must continue to strengthen our embrace of evaluation, peer review, and publication of our work in scholarly outlets. We should also be intentional in our efforts to publish in journals outside of our traditional fields. For instance, we should aim to publish in health promotion and health education, public health, environmental health, community planning and design, and other publication outlets. By submitting our work to meet the "rules" of these entities, we will gain their respect and find that, through the peer review process, we will learn and embody the language of their fields in more authentic ways.

## Conclusion

The foundation our forebearers laid for Cooperative Extension in its first century is strong. The future we construct on that foundation within the field of health and wellness will be an essential part of building stronger, healthier communities throughout the United States in the next century. Extension is well suited to address chronic disease prevention and management, health insurance literacy, health literacy, positive youth development, and health in all policies education.

We must also consider our role as translator of Extension's history and how it is relevant to health-related work, how Extension can engage with health-related organizations, embrace a partner perspective with other health-related organizations and agencies, and submit our efforts and scholarship to the review of other disciplines. In doing so, Extension stands to gain a broader reach and increase the impact of its work.

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## **Journal of Human Sciences and Extension**

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The Journal of Human Sciences and Extension is a peer-reviewed, open-access, online journal focused on disseminating knowledge and information to academicians, educators, and practitioners. Topics addressed include human development (e.g., early care and education, youth development); family studies; agricultural education; leadership development; extension; health and wellness; apparel, textiles, and merchandising; agricultural economics; nutrition and dietetics; family resource management; and program planning and evaluation. The journal seeks to bridge research and practice, thus all manuscripts must give attention to practical implications of the work. The journal is sponsored by the School of Human Sciences at Mississippi State University.

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