

# Cooperative Extension as a Framework for Health Extension: The Michigan State University Model

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## Abstract

### Problem

The Affordable Care Act charged the Agency for Healthcare Research and Quality to create the Primary Care Extension Program, but did not fund this effort. The idea to work through health extension agents to support health care delivery systems was based on the nationally known Cooperative Extension System (CES). Instead of creating new infrastructure in health care, the CES is an ideal vehicle for increasing health-related research and primary care delivery.

### Approach

The CES, a long-standing component of the land-grant university system,

features a sustained infrastructure for providing education to communities. The Michigan State University (MSU) Model of Health Extension offers another means of developing a National Primary Care Extension Program that is replicable in part because of the presence of the CES throughout the United States. A partnership between the MSU College of Human Medicine and MSU Extension formed in 2014, emphasizing the promotion and support of human health research. The MSU Model of Health Extension includes the following strategies: building partnerships, preparing MSU Extension educators for participation in research, increasing primary care patient referrals

and enrollment in health programs, and exploring innovative funding.

### Outcomes

Since the formation of the MSU Model of Health Extension, researchers and extension professionals have made 200+ connections, and grants have afforded savings in salary costs.

### Next Steps

The MSU College of Human Medicine and MSU Extension partnership can serve as a model to promote health partnerships nationwide between CES services within land-grant universities and academic health centers or community-based medical schools.

### Problem

The U.S. health care system has been experiencing dramatic pressures, including those arising from complex issues such as chronic health conditions, health disparities, poverty, and population changes. In response to these conditions, the Affordable Care Act (ACA) of 2010 legislated strengthening primary care to prevent disease and to promote health and wellness. One

intended means of strengthening primary care was directing health care systems to connect patients to community health resources, social services, self-management support, and education.<sup>1</sup> The ACA advanced such concepts as “patient-centered medical homes” and “health extension,” and it mandated that hospitals conduct health needs assessments to better serve their communities.<sup>1</sup> Given the changes in health care policy and the increased focus on engaging institutions and communities to jointly address complicated health issues, an interdisciplinary approach to both health care and health research is needed.

The ACA charged the Agency for Healthcare Research and Quality (AHRQ) to create the Primary Care Extension Program (PCEP). The purpose of the PCEP is to aid in the development of patient-centered medical homes and to enable community-based health extension agents to support patients by addressing the social determinants of health. The intention is for extension educators to support patients by connecting them to resources and by

building community partnerships that improve health<sup>2</sup>; however, the federal government has allocated no funding to support the PCEP.<sup>3</sup> One available means that health care practices and clinics may use as they strive to connect to communities is “health extension.”

The idea to work through health extension educators is based on the nationally known Cooperative Extension System (CES) that the U.S. Department of Agriculture has implemented for over 100 years. The CES is a nonformal educational system of outreach through which extension educators deliver research-based knowledge, usually provided by a state’s specified land-grant university, to members of the community. This system has proven successful in teaching farming methods and encouraging agricultural producers to adopt new practices. Other physicians and educators have proposed that this model be applied to health care transformation.<sup>2–4</sup> We propose that the CES is not just a model for health extension but, rather, a framework for establishing health extension in the United States consistent with the intentions of the ACA.

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In 2014, the Cooperative Extension's National Framework for Health and Wellness<sup>5</sup> identified the need for the CES to create partnerships and secure resources to respond to Americans' health conditions and disparities. This national framework is a tool to help the CES methodically address health and wellness at the individual, community, environmental, and policy levels to help transform health care in the United States.<sup>6</sup> The hope is that under this framework, cooperative extension can be for health in the 21st century what it was for agriculture in the 20th century.

The purpose of this report is to build on previously proposed models of health extension across the United States and describe the Michigan State University (MSU) Model of Health Extension to encourage the establishment of similar models based in land-grant universities and in partnership with academic health centers and/or community-based medical schools. The MSU Model of Health Extension shows how interdisciplinary teams can implement the vision of the ACA based on community needs and outcomes.

## Approach

Preliminary frameworks of health extension or primary care extension in the United States were supported by grants from AHRQ and the Commonwealth Fund. Between 2011 and 2013, 17 states participated as health extension project sites and learning communities, including 4 funded lead states (North Carolina, Oklahoma, New Mexico, and Pennsylvania). North Carolina and Oklahoma built infrastructure for primary care quality improvement with partners and then shared resources for practice transformations with these partners. New Mexico developed health extension rural offices (separate from the CES) from which local agents link community needs to resources.<sup>4</sup> Pennsylvania supported primary care practices to become patient-centered medical homes.

In answer to the call for health extension, Grumbach and Mold<sup>3</sup> proposed a Primary Care Cooperative Extension Service with a focus on patient education and linking practices to community resources. The CES infrastructure presently in place in the United States either currently provides, or is poised to provide, many

aspects of the proposed Primary Care Cooperative Extension Service, which later became the PCEP. The CES has a long history of providing programs known for addressing critical community needs in a timely fashion while connecting communities and community members to the vast research-based knowledge available through university faculty and expertise. To illustrate, the CES 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."<sup>5</sup> Now, through the CES, farming practices have become more efficient and environmentally appropriate. A Primary Care Cooperative Extension Service must have, as suggested by Grumbach and Mold,<sup>3</sup> a sustained, local presence within community practices. The CES is ideal for bringing health care resources to local populations as it has been intricately connected to communities since its formation in 1914 and has remained a trusted source of information and education.<sup>5</sup>

Similar to other CES programs across the nation, MSU Extension is an 800-person organization with experts in agriculture, youth development, health, and community development who live and work throughout the State of Michigan. MSU Extension responded to Grumbach and Mold's call for a Primary Care Cooperative Extension Service, initiating a partnership with the MSU College of Human Medicine in January 2014. MSU has one of the nation's first community-based medical schools.<sup>7</sup> Today, the MSU College of Human Medicine has seven community campuses with affiliated clinical sites in Michigan (Figure 1). It has recently intensified research capacity through the hiring of public health scientists at the Flint campus and by collaborating with health scientists located at the Traverse City, Marquette, and Midland campuses. MSU Extension's statewide presence, with staff in nearly every county, creates opportunities for connections between these medical faculty and Michigan residents and, in turn, enables opportunities for improved overall health.

The MSU Model of Health Extension is based on multidirectional relationships among campus- and clinic-based MSU

researchers, local MSU Extension educators, and community health partners all working to improve health outcomes by designing and conducting community-based medical research and then implementing effective health programs locally. The mission of the land-grant university—to help people improve their lives by bringing the vast knowledge resources of the university directly to individuals and communities—is operationalized through the translation of research to community-based education.

## Structure

MSU Extension and the MSU College of Human Medicine are institutionally aligned; that is, the two entities share organizational strategies in using resources to gain and sustain competitive advantages in scholarship, to serve the same audience statewide, and to contribute to the university's mission of being research-intensive and providing innovative outreach.<sup>8</sup> Formal arrangements between the College of Human Medicine and the College of Agriculture and Natural Resources (which houses MSU Extension) set the stage for operationalizing the MSU Model of Health Extension. Reliance Institutional Review Board (IRB) agreements facilitate the collaborative research conducted among community hospitals, MSU medical schools, and faculty researchers who are embedded in communities.

## Strategies

The MSU Model of Health Extension includes the following strategies: building partnerships, preparing extension educators for participation in research, increasing primary care patient referrals and enrollment in MSU Extension health programs, and exploring innovative funding opportunities.

One strategy to increase university partnerships, referred to as "speed meetings," began in April 2015. The goal of this now-annual event is to foster interdisciplinary and collaborative research by showcasing MSU Extension's programs and their potential to become interventions in research projects. Through rapid nine-minute presentations, MSU Extension educators explain current human health programming to human health research faculty from across the university. During



**Figure 1** Michigan State University College of Human Medicine community campuses and clinical sites, reprinted with permission from the Michigan State University College of Human Medicine.

each encounter, MSU Extension educators highlight program need (e.g., reducing obesity), target audience (e.g., federal funding benefit recipients), educational objectives (e.g., to teach food label reading to help people make informed purchases), outcomes thus far (e.g., increased consumption of fruits and vegetables), and potential future research connections (e.g., other dietary interventions for and assessments of low-income residents). The speed meetings showcase to research faculty the breadth and depth of MSU Extension health programs currently provided in the state, allowing these faculty members to see whether any align with their research interests.

MSU Extension educators prepare for involvement in research through an

optional professional development workshop called “Are You Research Ready?” This five-hour training covers steps of the research process as well as responsible conduct of research. The workshop helps educators learn how to communicate with researchers so that the latter may include the former in grant applications. Workshop activities and facilitated discussions relate to conducting community-based research and parlaying the research into published scholarship. Three workshops since 2015 have resulted in over 40 trained extension educators who all have IRB certification to conduct research projects.

A strategy to increase referral and enrollment in MSU Extension health-

related programs involves intentional marketing to medical professionals. This effort, called “Rx for Health,” informs and educates physicians and other health care providers so that they may direct patients to contact their local MSU Extension office for more information about health-focused programs. The referral system helps patients increase their self-management capacity to improve their health after a primary care visit. Patients may select from 10 educational programs (e.g., eating healthy and being active, living well with diabetes, dealing with stress and anger, cooking for health). Thus far, nearly 1,000 branded referral pads have been distributed to Michigan physicians and primary practice clinics, and referral strategies are currently being pilot tested for effectiveness.

Funding opportunities for MSU Extension that are focused on community engagement in the medical and health research arena are growing. The demand for community-based research to address health disparities among various populations (e.g., chronic disease self-management among participants with type 2 diabetes) is also increasing. Researchers often lack the personal relationships with, connections to, and trust of community members that are needed to translate or disseminate research findings into clinical initiatives. Community ties and program delivery are not typically within the primary role of researchers, so extension educators can assist. Specifically, the MSU Extension has helped recruit participants from communities to take part in studies, and MSU Extension educators have conducted needs assessments, disseminated research or clinical findings, and implemented and evaluated health programs delivered to underserved audiences.

## Outcomes

As a result of forming the MSU Model of Health Extension, researchers and Extension professionals have made 222 connections since 2014. Two examples of connections showcase the potential for this model of health extension.

After hearing a presentation at a speed meeting event that featured the MSU Extension Stanford University Chronic Disease Self-Management Program (called PATH in Michigan), a researcher from the MSU College of Nursing included extension educators on a National Institutes of Health grant application to conduct research on the health benefits (or “extended health”) of self-compassion meditation with two groups of participants experiencing chronic conditions. Educators already trained and delivering the PATH program will add a research component to determine whether participants maintain higher levels of self-management and self-determined quality of life when they participate in the self-compassion meditation intervention.

Another example of the MSU health extension model in action resulted from a meeting of educators and researchers from the MSU Department

of Obstetrics, Gynecology, and Reproductive Biology who were in the final phase of an AHRQ-funded research demonstration project. The researchers were working to adapt the “Informed Activated Patient” curriculum with mothers insured by Medicaid. They had already involved a variety of community partners in the project (e.g., from the local hospital, health department, clinics) but had not yet organized expertise in establishing care transitions between prenatal and primary care for low-income women. An Extension educator developed a dissemination toolkit for the researchers, providing suggested lesson plans, activities, and language for promotional materials to deliver the research-based content in a variety of formats such as group and in-home settings.

In addition to the 222 connections, since 2014, the MSU Model of Health Extension has built partnerships through contacts and awareness building with 828 individuals representing community organizations and 94 individuals internal to MSU.

Overall, exploring innovative funding opportunities has been mutually beneficial for community-based researchers, MSU Extension educators, and campus-based faculty. While initially MSU Model of Health Extension organizers assumed most interest would come from the College of Human Medicine and its research network of community campuses and clinical sites, unexpected interest has arisen from many colleges and departments across the university. In addition, grant research dollars for MSU Extension educators on funded research projects have led to salary savings.

## Next Steps

Next steps for the MSU Model of Health Extension include tracking all grant research dollars, reporting the results of partnerships (e.g., how many patients take advantage of the educational program offerings, how many moms receive postpartum care), and continuing to build relationships with university researchers and community residents.

This report offers a replicable means of developing a National PCEP<sup>2</sup> or Primary Care Cooperative Extension Service.<sup>3</sup>

There are many creative ways to build a sustainable structure for a health extension model. Instead of creating new infrastructure in health care, the CES represents an ideal vehicle for providing health-related research and care delivery given its proven track record, an existing budget, a staffing structure that includes content experts in human health, and well-developed local community partnerships. The MSU College of Human Medicine and MSU Extension partnership can serve as a model to promote health partnerships nationwide within the 106 land-grant universities and within academic health centers or community-based medical schools.

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