Making Wisconsin a Healthier State
## Table of Contents

### Grants Awarded by the Oversight and Advisory Committee

**Community Academic Partnership Fund**

- ACTIVATE: Advocacy for Children — Transformational Impact via Action and Teamwork for Engagement .......................... 4
- Adams County Community Wellness Program ........................................ 5
- Addressing the Mental Illness Tobacco Disparity: Peers Helping Peers .......................................................... 6
- Applying Clinical Data to New Public Health: A Model for Accountable Care Communities .................................. 7
- Bringing Healthy Aging to Scale: Improving Wisconsin’s Capacity to Implement and Sustain Evidence-Based Prevention Programs for Older Adults .................................................. 8
- Building the Mentally Healthy Workplace .............................................. 9
- Changing Views of Hunger: One Community at a Time .................. 10
- Community Action and Community Capacity Building for Type 2 Diabetes Prevention ........................................ 11
- Evaluation of the Bilingual Healthy Choices Program ................ 12
- Growing Farm to School: Cultivating Childhood Wellness through Gardening .............................................. 13
- Harvest of the Month Partnership .......................................................... 14
- Increasing Cultural Congruence Among Nurses in Wisconsin ........ 15
- Latino Youth Health Leadership Teams: Implementing the Healthy Activities Partnership Program for Youth (HAPPY II) .......................................................... 16
- Madison-Dane County Healthy Birth Outcomes .......................... 17
- Public Will Building to Reduce Obesity in the Latino Community of Milwaukee ........................................... 18
- Yoga’s Effect on Fall Risk Factors in Rural Older Adults ........ 19

**LifeCourse Initiative for Healthy Families**

- Centering Program of Racine LifeCourse Initiative for Healthy Families .................................................. 20
- Healthy Families Kenosha .......................................................... 21
- Healthy Parents, Healthy Babies (Healthy Next Babies) .......... 22
- Implementation of a Rock County Fetal Infant Mortality Review Team .................................................. 23
- Reducing African American Infant Birth Disparities through Decreased Prison Recidivism and Increased Living-Wage Employment of Mothers and Fathers ...................................... 24
- Striving to Create Healthier Communities through Innovative Partnerships .................................................. 25

### Grants Awarded by the Partnership Education and Research Committee

**Collaborative Health Sciences Program**

- The Wisconsin Surgical Coaching Program ........................................ 26

**New Investigator Program**

- Discharge Order Completeness and 30-Day Rehospitalizations in Rural Wisconsin Nursing Home Patients ......................... 27
- Mechanistic Insights into the Role of Grainyhead Proteins in Neural Tube Closure Defects ........................................ 28
- Nanoparticles for Treating Restenosis: Sustained and Targeted Local Drug Delivery ........................................ 29
- Understanding HIV-1 Cell-to-Cell Transmission ........................................ 30

**PERC Opportunity Grant**

- Building an Accessible Database of Patient Experience for the U.S. .................................................. 31
Overview

The Wisconsin Partnership Program at the University of Wisconsin School of Medicine and Public Health was established in 2004 through a generous endowment from Blue Cross Blue Shield United of Wisconsin. The Wisconsin Partnership Program provides resources to fund research, education and community partnerships to improve the health of the people of Wisconsin.

Two committees carry out the Wisconsin Partnership Program’s governance and funding decisions: the Oversight and Advisory Committee (OAC) and the Partnership Education and Research Committee (PERC). The primary responsibility of the Oversight and Advisory Committee is to direct and approve funds for public health initiatives while the Partnership Education and Research Committee allocates and distributes funds for education and research initiatives that advance population health.

In 2016, 28 Wisconsin Partnership Program community and research grants concluded. They focused on a broad range of topics including:

- Access to health services
- Cardiovascular health
- Data and surveillance
- Healthcare delivery
- Infectious disease
- Injury and violence
- Maternal, infant and child health
- Mental health
- Nutrition
- Obesity
- Physical activity
- Public health work force development
- Social determinants of health (the structural determinants and conditions—social, economic and environmental—in which all people are born, grow, live, work and age that affect health)
- Substance abuse

Grant Outcomes

Below are selected highlights from several 2016 concluded grants:

Community Grant Highlights

- Wheaton Franciscan Healthcare – All Saints implemented the CenteringPregnancy Program in Racine. The program provides pregnancy related group education from obstetricians to expectant moms with close due dates. The program was completed by 420 women, resulting in an average rate of preterm birth of 4.2 percent in comparison to the national average of 11.5 percent.

- The Wisconsin Chapter of the American Academy of Pediatrics enhanced the system of care at Wingra Family Medical Center and improved provider education by training healthcare and social service students to link families to community resources. In one year, students screened 627 patients, of which 59 percent identified at least one need. The project estimates that it will screen at least 1,750 patients over the next two years.
• The Great Lakes Inter-Tribal Council, Inc. significantly increased nurses’ knowledge about American Indian beliefs, values and customs, as well as awareness of institutional discrimination and recognition of the importance of cultural competence in healthcare.

• Adams County Health and Human Services Department of Public Health improved healthcare by gaining insurance coverage (through WEA Trust) for health navigation services in Adams County. Health navigators can often provide services and education to patients who have chronic health problems, reducing cost for insurance carriers and healthcare providers.

Research Grant Highlights

• Dr. Amy Kind at the UW School of Medicine and Public Health Department of Medicine and collaborators evaluated hospital discharge orders to nursing homes, identifying that orders frequently miss information. They found that orders lacking information about the drug Warfarin resulted in greater risk of 30-day rehospitalization and/or death. The project is now developing interventions to improve this transitional process.

• Dr. Caprice Greenberg at the UW School of Medicine and Public Health Department of Surgery and collaborators developed a surgical coaching program, pairing surgeons with trained surgical coaches to enhance technical and interpersonal skills as part of their continuing professional development. The ultimate goal is to improve the quality and safety of surgical care. The coaching program received national interest, generating five additional coaching initiatives and receiving almost $3 million in additional funding.

• Dr. Nancy Pandhi at the UW School of Medicine and Public Health Department of Family Medicine and Community Health and collaborators established a first-of-its-kind network and website in the United States on patient experiences at healthexperiencesusa.org, beginning with the launch of a module on young adults’ experiences with depression. The module includes 250 video, audio and text clips from in-depth interviews. The project collaborates with three other universities and is the U.S. representative for this international effort. The project will launch more than five additional modules over the next three to five years, including one on veterans with traumatic brain injury.

Dissemination

Of the 28 grants ending in 2016, grantees have published 12 peer-reviewed publications, submitted or plan to submit 21 publications for peer-review, given more than 80 local, national or international presentations, conducted more than 70 trainings, were featured in more than 24 print media stories and have one patent pending.

One example of a grantee committed to increasing impact through dissemination is Community Groundworks, a Madison-based nonprofit organization that connects people to nature and local food. They published a book on principles of garden-based education that was distributed to more than 3,000 educators in Wisconsin and in 49 states, Washington, D.C., and in more than 35 countries around the world. Their work was also featured on Wisconsin Public Radio.
ACTIVATE: Advocacy for Children — Transformational Impact via Action and Teamwork for Engagement

The Challenge: A number of organizations are advocating for child health in Wisconsin communities. These groups have expressed a desire to work in more effective and sustained collaborations. In addition, there is a need to offer health advocacy training to practicing, in-training physicians and other future health care and services providers.

Project Goal: ACTIVATE aimed to enhance healthcare providers’ ability to advocate while prioritizing child advocacy initiatives. The group completed a community needs assessment to determine areas of focus in program and partnership development. The assessment identified many “gap” areas in Wisconsin health and development, including early intervention, healthcare delivery, obesity and food security.

Results: ACTIVATE implemented two child advocacy projects:

• The Clinical Resource Navigation Program (CRNP) was implemented at Wingra Family Medical Center in March 2016. This program expanded clinic-based screening for socioeconomic-based health barriers, and trained healthcare and social service students to work directly with families in need to link them to community resources. Since the launch of CRNP, students have screened 627 patients, with 59 percent of patients identifying at least one need. The needs most frequently identified were food, utilities, employment skills and medical supplies. Legal needs included tenant issues, immigration and family law, such as child support. The program averaged 120 open cases at any one time. In the past year, the CRNP had great success engaging students, enabling them to staff the clinic with navigators 40 hours per week. ACTIVATE estimates a minimum of 1,750 patients will be screened over the next two years; 1,000 of whom will have identified needs and work with navigators. Additionally, the CRNP program will be sustained through a grant from the David and Mary Anderson Foundation. This funding will incorporate community health workers as supervisors in the clinic to enhance students’ ability to assist patients and better understand challenges of living in poverty and social and legal needs.

• The Kids Health Policy Project (KHPP) was established as a resource for accurate, reliable, non-partisan child health information for public and private policymakers who develop child health policy and legislation in Wisconsin. Policymakers were invited to contact the ACTIVATE team for child health data to inform policy decisions. KHPP provided a legislative briefing on innovative approaches to trauma informed care and was instrumental in the creation of the Wisconsin Legislative Children’s Caucus in the Wisconsin State Legislature (legis.wisconsin.gov/topics/childrenscaucus/).

Through funding from the UW Morgridge Center for Public Service, this project will launch a three-credit service-learning course in fall 2017.
Adams County Community Wellness Program

The Challenge: Adams County has a large aging, low socioeconomic status population with a high burden of chronic disease. Adams County’s rural location results in long travel distances for those seeking care, particularly specialty care. Local leaders have identified a need to improve chronic disease awareness, increase prevention and screening behaviors and promote informed patient decision-making to increase access to care.

Project Goal: The Adams County Community Wellness Program (CWP) aimed to reduce morbidity and mortality from chronic disease by:

1) Increasing prevention behaviors, use of screening tools and access to quality care
2) Improving access to voluntary support organizations and health care systems
3) Increasing community member knowledge and decision-making capacity
4) Developing a self-sustaining Adams County Community Wellness Program

Results: The CWP program utilized a Community Health Worker (CHW) who developed and provided educational sessions focusing on chronic diseases and community services to almost 200 participants in 17 educational sessions. A health navigator, who was a public health nurse, interacted with 241 clients and worked with them to identify and address health risks and issues. A follow-up survey showed that participants increased knowledge about appropriate behaviors and indicated positive lifestyle changes including many receiving recommended screenings. As expected, it is too soon to see long-term results showing a reduction in chronic disease.

The grantee was a co-founding member of the six-county Central Wisconsin Health Partnership that integrates medicine, human services and public health initiatives by sharing quality services with all residents across the region. The partnership was approved by the Wisconsin Department of Health Services as a Comprehensive Community Services provider, including the CWP’s health navigator, to reduce the effects of an individual’s mental and substance abuse disorders.

Importantly, WEA Trust, the county employees’ insurance carrier, now covers the CWP health navigator services to those insured by WEA Trust in Adams County. The agreement provides for payment of health navigator services and travel costs, opens up the program’s services to younger clients and ensures sustainability for the CWP program.

Moving forward, the CWP expects to:

- Offer health navigator services to other commercial insurance providers
- Actively participate in care coordination planning, including accessing state funding
- Continue gathering outcome data to show the CWP model’s impact
- Use the newly created community health specialist position, along with the health navigator, to continue outreach and education to community residents

Wisconsin Partnership Program 2016 Outcomes Report
Addressing the Mental Illness Tobacco Disparity: Peers Helping Peers

The Challenge: While smoking rates have declined from 45 percent in 1965 to 18 percent among the general population, the rate of smokers with persistent and severe mental illness remains above 50 percent. Smoking is a major contributor to the average 24 years of life lost by people with a severe mental illness. Further, the rate of smoking increases dramatically for more severe mental illness, increasing from 24 percent for those with a single mental illness to 54 percent among those with more than four diagnoses.

In Wisconsin, those with the most severe and disabling mental illnesses are cared for in Community Support Programs (CSP). CSPs provide comprehensive outpatient health and social services to improve the quality of life for these individuals and to prevent their institutionalization or incarceration.

Project Goal: The National Alliance on Mental Illness (NAMI) Wisconsin partnered with the UW Center for Tobacco Research and Intervention to implement a smoking cessation program at CSPs as a step toward developing effective interventions across the state.

Smoking cessation activities were tailored to each smoker and included a variety of approaches such as one-on-one counseling, goal setting, nicotine replacement products and group meetings. The intervention model became known as the “Bucket Approach” because it measured a client’s interest in quitting, informed clinicians of which “bucket” their client fell in and indicated the appropriate smoking cessation activities for their stage of readiness.

Results: After six months of CSP-wide smoking cessation services, daily cigarette consumption went down by 15.5 percent with two clients quitting for good.

More importantly, the messages and information presented during this project were shown to have lasting effects. In a post-intervention survey, 40 percent of clients had reduced their smoking by half or more.

These targeted interventions are now being integrated into the overall CSP clinical framework and treatment standards. Participating CSPs have experienced a culture shift and made a commitment to continue integrating smoking cessation goals into client treatment plans as standard practice. Through further dissemination, 45 CSP clinical staff statewide were trained regarding the “Bucket Approach.”

NAMI Wisconsin was awarded funds from the state Bureau of Prevention Treatment and Recovery to conduct five listening/training sessions in Milwaukee, Appleton, Lancaster, Pewaukee and Chippewa Falls to provide clinical staff with an orientation to the Bucket Approach and to learn about likely barriers to its dissemination and implementation.
Applying Clinical Data to New Public Health: A Model for Accountable Care Communities

**The Challenge:** In mid-sized metropolitan areas, it is difficult to determine the magnitude of racial and ethnic health disparities. Surveys and rankings may mask underlying disparities because large population-level surveys do not offer enough information about small groups and small areas. However, electronic health data offers geographic and relatively objective clinical data to gauge disparities at the local level and inform how resources are allocated.

**Project Goal:** The Public Health Department of Madison and Dane County aimed to utilize the PHINEX (UW Electronic Health Record-Public Health Information Exchange) to longitudinally track obesity and chronic disease in the community. The project's goals were to inform public health planning and develop data-driven messages to engage diverse partners to support and implement public health initiatives for chronic disease prevention.

**Results:** The project analyzed de-identified electronic medical record data for more than 270,000 UW Health patients in the 2009-2012 timeframe. They reviewed overweight/obesity prevalence among children in Dane County as well as asthma and Type 2 diabetes.

The analysis assigned data to Madison aldermanic districts and determined the districts with the greatest burden of obesity/disease. Results indicated that four Madison aldermanic districts bear the greatest burden of disease across adult obesity/overweight, adult and youth asthma and adult Type 2 diabetes. These districts are also home to a high percentage of low-income people and people of color – a finding that aligns with research that links race, poverty and neighborhood level factors to the community’s health status.

The grantee found that resident movement and missing data among low socioeconomic populations made longitudinal tracking for public health challenging. The project also found that using electronic health record data requires advanced biostatistical resources, which is beyond the capabilities of most health departments.

The project shared data through the two reports with the Dane County Healthy Kids Collaborative, Madison alders and staff of the Madison Metropolitan School District. The reports included recommendations and links to strategies such as implementing Health in All Policies at the city and county level and providing better access to places for physical activity. The project data will continue to be shared with community partners including the Madison Food Policy Council, County Food Council, staff for the City of Madison comprehensive planning process and many others. The data has also been used to leverage funds for community partners and planning agencies working with Dane County populations.
Bringing Healthy Aging to Scale: Improving Wisconsin’s Capacity to Implement and Sustain Evidence-Based Prevention Programs for Older Adults

The Challenge: The population of older adults in the United States is expected to nearly double in size over the next 25 years. Two of the greatest public health issues affecting older adults are falls and chronic conditions. Falls are sustained by one-third of older adults each year. Chronic conditions affect about 80 percent of older persons. Evidence-based self-management programs can reduce the incidence of falls and decrease healthcare utilization from chronic disease.

Project Goal: The goal of this project was to increase the ability of rural county aging offices, in collaboration with local partner healthcare and community organizations, to implement and sustain two evidence-based programs, Stepping On (a group-based falls prevention program) and Living Well (a chronic disease self-management program). Sixteen rural counties without workshops in the previous year were randomized to receive the quality improvement training for one year or to be on a waitlist to receive the training the following year.

Results: Counties participating in the quality improvement training significantly increased the number of workshops (1.31 per county), participants (12.81 per county), and completers (9.75) in rural Wisconsin counties. Living Well participants reported fewer emergency room visits and hospitalizations. Stepping On participants reported significantly fewer falls and emergency room visits.

The project also found key characteristics of agencies which had increased the number of workshops, including stable and supportive agency leadership and connections with external partners. The grantee revised materials for all leader programs to ensure their host agencies and respective county Aging and Disability Resource Centers use those elements to ensure success.

Falls prevention work has been supported by two additional grants from the Wisconsin Partnership Program to adapt Stepping On for Latino seniors and to sustain the program and exercise in an online setting. In addition, this work has led the Wisconsin Institute for Healthy Aging and the Greater Wisconsin Agency for Aging Resources to provide up-front training for coaches on the use of quality improvement methods.
Building the Mentally Healthy Workplace

The Challenge: A 2009 Wisconsin employer survey found that “almost two-thirds of respondents believed that behavioral health issues are ‘somewhat’ or ‘very’ prevalent in their workplace” yet almost half reported that their workplace does not have a specific plan to address employee mental health or wellness. A disconnect exists between the recognized impact of mental health disorders in the workplace and the lack of corresponding workplace practices.

Project Goal: The purpose of the project was to evaluate the impact of mental health interventions in the workplace on employee health and functioning. The main objectives of the project were to:

• Work with employer partners to modify existing supervisor/manager training to better meet their perceived needs with regard to the content and structure of the training
• Identify appropriate and acceptable employee education materials
• Develop and implement a robust evaluation of the impact of these interventions using survey data and health claims data

Results: The project successfully developed online training for supervisors and managers built around stories of individuals who had experienced mental health disorders. The training modeled how managers might respond in an effective manner that addresses both the needs of the individuals and of the organizations. Results showed improvement in knowledge and shifting perception of mental health issues. At baseline, only one percent of managers reported actively trying to improve the mental health of their workplace in the past six months compared to 63 percent at the final assessment. However, no statistically significant change in insurance claims data was found during the grant period.

Overall, the data seem to suggest an evolving culture shift toward enhanced sensitivity to mental health issues. The project has implications for workplace mental health that demonstrates that strong leadership buy-in and support may be critical.

The grantee is currently working on two efforts to further this work, including a grant for suicide prevention for middle-aged men using interventions at the workplace, and a planning symposium later this year on mental health and substance abuse parity for employers.

Grantee: Mental Health America of Wisconsin
Academic Partner: Jerry Halverson, MD, UW School of Medicine and Public Health, Department of Psychiatry
Dates: 5/1/2013-12/31/2016
Amount Spent: $138,763
Program: Community Academic Partnership Fund
**The Food as Medicine Partnership changed local agency systems by conducting food insecurity screenings and providing resources to help increase access to healthy foods.**

**Changing Views of Hunger: One Community at a Time**

**The Challenge:** Food insecurity, defined as “the state of being without reliable access to a sufficient quantity of affordable, nutritious food,” goes far beyond hunger and is associated with increased hospitalizations and emergency department visits, increased risk of chronic diseases, more frequent instances of oral health problems and overall poor physical quality of life. One in eight residents and one in five Eau Claire children are food insecure.

**Project Goal:** The goal of this planning grant was to convene a broad-based coalition and create an evidence-based strategic plan for increasing access to healthy foods for low-income Eau Claire County residents.

**Results:** The broad-based coalition, the Food as Medicine Partnership (FAMP), included representatives from 17 local groups and agencies and two food insecure individuals. Coalition members created a strategic plan to increase access to healthy foods and reduce stigma associated with food insecurity. Members sought information regarding broad determinants of health and their effect on access to healthy foods. They demonstrated readiness to mobilize the Eau Claire community to implement the strategic plan, and identified specific steps to address food insecurity.

The Food as Medicine Partnership results were disseminated to approximately 200 participants through six local and statewide conferences. Attendees were trained about food insecurity, the key components of the strategic plan, and successful local and regional organizations currently screening for food insecurity.

A significant impact of this grant was agreement among several coalition partners to use the following two evidenced-based food insecurity screening questions:

*For each statement, please tell me whether the statement was “often true, sometimes true, or never true” for your household:*

1. “Within the past 12 months we worried whether our food would run out before we got money to buy more.”
2. “Within the past 12 months the food we bought just didn’t last and we didn’t have money to get more.”

If clients answer often or sometimes true to at least one of the questions, they were provided resource guides for accessing local healthy food at locations such as:

- The Chippewa Valley Free Clinic
- The Hmong Mutual Assistance Association Hmong Elder Wellness program
- The Eau Claire Area School District’s Early Learning Center Head Start

To sustain this work, FAMP is now housed in Eau Claire County’s Healthy Communities Chronic Disease Prevention Action Team subgroup. The partnership continues to be comprised of involved and active members and is seeking additional funding.
Community Action and Community Capacity Building for Type 2 Diabetes Prevention

The Challenge: Diabetes is the seventh leading cause of death in the United States. In 2009, the overall estimated cost of diabetes in adults was a staggering $6.10 billion in Wisconsin and $1.19 billion in Milwaukee County, respectively. Type 2 diabetes disproportionately affects African American women. Women who present with Type 2 diabetes before pregnancy have an increased risk of adverse birth outcomes including miscarriage, birth defects, preterm delivery, early fetal death and infant death. There is also a gap in access to culturally relevant diabetes interventions for African Americans.

Project Goal: The project tested the feasibility of incorporating the Community Lay Health Advisor into a community-based lifestyle intervention to reduce risk for Type 2 diabetes in high-risk African American women. The grantee adapted the empirically supported Diabetes Prevention Program.

Results: The project conducted focus groups with 45 participants to understand the factors that influence physical activity and dietary behaviors for African American women. Thirty-eight participants completed the follow-up survey directly after the seven-week intervention, and 30 attended the six-month booster session. This project was successful in culturally tailoring an evidence-based diabetes prevention intervention. Lay Health Advisors were involved in this formative process and delivered intervention to the satisfaction of participants. Findings from the pilot intervention showed that participants experienced an increase in moderate-level physical activity and improved self-efficacy to manage symptoms and the disease in general. This project received a collaboration award from the UW-Milwaukee Zilber School of Public Health.
The Challenge: The Sixteenth Street Community Health Center (SSCHC) and its providers in Milwaukee have observed an alarming increase of overweight and obesity among their patient population. This trend is observed in Milwaukee more broadly, and specifically for Latino adults and youth. This project aimed to evaluate the SSCHC’s bilingual Healthy Choices Program, which empowers participants to adopt healthier eating patterns and a more active lifestyle. Previous evaluation had been conducted informally and internally and no materials existed to share program practices, curriculum, or evaluation results more broadly.

Project Goal: This project aimed to strengthen the evaluation of the Healthy Choices curriculum and use the evaluation to build an evidence-based, family educational model for obesity intervention that can be replicated locally and nationally.

Results: The project convened community and academic advisors, reviewed the curriculum, its materials and evaluation tools, and made recommendations for improving the nutritional science rigor and cultural appropriateness. All aspects of the program were improved based on the recommendations. The team successfully implemented the updated 12-week intervention (based on the evaluation) to four cycles of families. Focus groups were implemented with graduates from the intervention, to further learn how to improve the recruitment, implementation and evaluation of the intervention.

The evaluation found that the program successfully decreased body mass index. Participants also changed their lifestyles based on the program. They drank less soda, ate out less, ate more fruits and vegetables and cooked more at home. Moreover, 60 percent of low-income families reported spending the same or less on food after making these healthier changes. They also reported an increase in their overall physical activity and a reduction of their stress levels. Finally, adult participants indicated that the program helped them to increase their family and community connection.

The project successfully sustained its work.

- It developed a plan to launch and promote the replication of Healthy Choices Model, including a website to promote the tool and model (sschc.org/health-community/healthy-choices/bilingual-model/)
- It developed a training toolkit that includes curriculum, evaluation tools, handouts and all the materials needed to replicate the model
- The group translated all materials, tools and curriculum to make them fully available in Spanish
- It published a bilingual cookbook with over 50 culturally appropriate recipes that were successfully tested with hundreds of program participants
- The project secured ongoing funding through the State of Wisconsin
Growing Farm to School: Cultivating Childhood Wellness through Gardening

The Challenge: In Wisconsin, 25 percent of Wisconsin high school students and approximately 29 percent of children age two to four are obese. Garden-based nutrition intervention programs have been shown to increase fruit and vegetable intake, health-related knowledge, willingness to taste, and preference for fruits and vegetables, in schools around the country. School gardening can also shape long-term healthy diet choices.

Project Goal: The project aimed to improve child health and nutrition by:

• Increasing the number of educational gardens at schools and childcare centers across Wisconsin
• Increasing consumption of fresh fruits and vegetables, as well as opportunities for regular time outdoors among children in Wisconsin
• Contributing to the evidence base that the comprehensive farm to school model, which includes gardening and garden-based nutrition education, improves child health outcomes

Results:

• Community GroundWorks provided trainings to 1,675 educators at 76 trainings across the state (more than four times their goal of 400 educators). Twenty-three new youth gardens have been added.
• The grantee produced more than 21 briefs covering a wide range of topics. One brief encouraged school garden language in school wellness policy. The number of districts with garden or farm to school language in school wellness policies jumped from eight in 2013 to 14 in 2016. The latest publication on principles of garden-based education was initially distributed to more than 3,000 educators in Wisconsin, and to 49 additional states, Washington, D.C. and 35 countries.
• Evaluation results found that educator training on garden-based education best practices can lead to increases in self-efficacy for planning, maintaining and sustaining school gardens, as well as strengthen beliefs in the positive health outcomes of such programs. The project also found a trend indicating that students in schools with gardens reported higher exposure to different kinds of fruits and vegetables. School staff members also indicated that schools with gardens were more likely to serve local foods in the cafeteria and to taste test a richer variety of vegetables in the classroom.
• An informal statewide youth garden network grew steadily over the three-year grant. The project is sustained through a five-year Wisconsin Partnership Program Community Impact Grant to further build a movement around school- and childcare-based gardening initiatives.
Harvest of the Month Partnership

The Challenge: In La Crosse County, 59 percent of younger adults and 73 percent of older adults are either overweight or obese. A diet high in fruits and vegetables is associated with decreased risk for chronic disease and improved weight management, yet 24 percent of adults and less than nine percent of teens consume the recommended five servings per day.

Project Goal: The La Crosse County Health Department developed the Harvest of the Month Partnership (HOM) to increase access to and consumption of fruits and vegetables among children and adults living in La Crosse County. The partnership included grocery stores, school districts, farmers, restaurants, community gardens, worksites, two local universities and the county health department. It aimed to increase the frequency with which locally produced fruits and vegetables were available on school menus in elementary schools and Head Start programs. The project also implemented a wellness policy at all Head Start Centers to promote healthy eating habits and fruit and vegetable consumption. Evidence-informed strategies were also implemented at two worksites.

Results: The health department distributed 107,968 produce samples at school sites. Participating districts also offered these same locally grown produce items at least monthly throughout the project. More than 13,000 samples were distributed at worksites. In addition, each school hosted a celebrity chef cooking class demonstrating the HOM food at least once per year. Holmen High School also held an annual “Iron Chef” competition, and featured the winning recipe on the school lunch menu. More than 5,000 educational handouts were distributed at worksites. Additional activities took place at several community sites.

This project established effective partnerships with community organizations enabling joint efforts to increase county residents’ fruit/vegetable consumption, promote local foods and support healthy eating habits. The project added wellness language to policies at four school districts, supporting area school gardens and farm to school programs. The project also worked with the school districts and food distributors to increase use of local foods. Head Start will continue to incorporate local produce in their breakfast and snack meals as well.

The project will be sustained with the policy and systems changes above and through a community partnership between participating school districts, La Crosse County Health Department, Gundersen Health System and Mayo Clinic Health System. Each partner agreed to contribute to the ongoing costs of the program for at least the next three years.
Increasing Cultural Congruence Among Nurses in Wisconsin

The Challenge: Despite recent advances in healthcare and prevention activities, there still exists a substantial disparity between the health status of American Indians and that of the general population in Wisconsin. Nurses are on the front lines of healthcare in tribal health clinics, yet few nurses have been trained in cultural competency, defined as “a set of congruent behaviors, attitudes and policies that come together in a system, agency or among professionals that enables effective work in cross-cultural situations.” Because nurses are central to patient care, at both tribal and non-tribal facilities, their level of cultural competence skills can have a dramatic impact on a patient’s level of trust, and ultimately their compliance to prevention and treatment plans. Nurses are well situated to assist American Indian patients in improving their health.

Project Goal: The project aimed to improve the quality of nursing care received by American Indian patients in Wisconsin. This community-based quality improvement project had two objectives:

• To advance culturally congruent nursing practice by using traditional talking circles to educate nurses about American Indian cultures
• To increase the number of American Indian nurses by establishing a comprehensive support system for high school students interested in nursing

Results: A series of five talking circles, conducted at four Wisconsin American Indian communities, provided 32 nurses cultural immersion experiences with members of various tribal communities. Nurses learned tribal-specific beliefs, customs and traditions, and barriers (e.g., stereotyping) that interfere with the provision of high quality healthcare.

The project significantly increased nurses’ knowledge about American Indian beliefs, values and customs, as well as awareness of institutional discrimination and recognition of the importance of cultural competence in healthcare. Student support efforts resulted in 10 Lac du Flambeau youths reporting interests in nursing. The project also hosted two Native Nations Nursing Summits attended by native students, native nurses and non-native nurses. Almost 200 people attended. The team also developed two recruitment digital stories featuring American Indian nurses who practice in tribal communities, available at wearehealers.wisc.edu.

This project received a $1.6 million U.S Health Resources and Services Administration grant to sustain and expand this effort. The project will develop support services to admit, retain and graduate 30 Native American nursing students.

Grantee: Great Lakes Inter-Tribal Council, Inc.

Academic Partner: Audrey Tluczek, PhD, RN, FAAN, UW-Madison School of Nursing, Alton Smart, MSW, UW-Stevens Point Department of Sociology, Robin Moskowitz, JD, UW School of Medicine and Public Health, Department of Population Health Sciences

Dates: 7/1/2012-12/31/2016

Amount Spent: $359,713

Program: Community Academic Partnership Fund

The project significantly increased nurses’ knowledge about American Indian beliefs, values and customs, as well as awareness of institutional discrimination and recognition of cultural competence in healthcare.
**Grantee:** Centro De La Comunidad/United Community Center, Inc.

**Academic Partner:** Samuel Dennis, PhD, MS, MLA, UW School of Medicine and Public Health, Department of Family Medicine and Community Health

**Dates:** 4/1/2013-6/30/2016

**Amount Spent:** $399,987

**Program:** Community Academic Partnership Fund

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**Latino Youth Health Leadership Teams: Implementing the Healthy Activities Partnership Program for Youth (HAPPY II)**

**The Challenge:** The Bruce-Guadalupe Community School, housed at the United Community Center (UCC) in Milwaukee, helps students achieve academic success within a Hispanic community setting. This school serves 1200 children from K-8th grade. A recent pilot study at the school found that 52.5 percent of the children were overweight or obese. Research shows that high body mass index in adolescence leads to a host of poor health outcomes in adulthood. The project aimed to improve healthy eating and physical activity habits among Latino children at the Bruce-Guadalupe Community School.

**Project Goal:** The project provided culturally appropriate programming in physical activity, healthy eating, healthy neighborhoods and media literacy. The HAPPY II team delivered 256 extracurricular classes to a total of 48 Latino children over three years. Family education events engaged HAPPY participants and their families in educational activities and ranged from family-only events drawing 50-75 people to whole school events attracting about 300. The project introduced a summer bike camp for the HAPPY youth, their siblings, and other community youth (17 participants).

**Results:** Participants demonstrated measureable increases in knowledge about food, nutrition and healthy choices, physical activity, the body and the metabolic system. They also learned about the health impacts of neighborhoods, including access to healthy food, safe places for physical activity, and how media influences unhealthy food choices. The students helped develop a lunch menu with healthier versions of typical school lunches, and helped publish “Your Own Healthy Lifestyle Book” for sharing with others. The students also demonstrated increased self-efficacy for healthy eating and physical activity.

The results and experiences of the HAPPY II program laid the foundation to collaborate with Carroll University’s Health Sciences Program to modify and continue a similar after-school parent-and-child nutrition/exercise program in the fall of 2016. It will be led by Carroll graduate students, under faculty supervision. Carroll has committed 10-20 students who will rotate through the program each semester as part of their academic curriculum. This is a low-cost program for UCC, and provides a public health training opportunity for health sciences students in their academic preparation.

UCC will continue its collaborations with bicycling partners to incorporate group/family bicycling as an acceptable form of exercise for Latinos in and around the neighborhoods surrounding the school. It will add the two-week summer youth bike camp to the summer recreation program.
Madison-Dane County Healthy Birth Outcomes

The Challenge: In Dane County, there is, on average, an infant death or stillbirth every six days. Fetal Infant Mortality Review (FIMR) is a national process of collecting health, social, economic, cultural, safety and other information on every stillbirth and infant death in the first year of life. These systemic factors can then be addressed to improve birth outcomes and prevent future losses. Most FIMRs include a maternal interview component; however, Dane County’s FIMR was missing this important data source.

Project Goal: This project enhanced Dane County’s FIMR by collecting information directly from 29 mothers who experienced a stillbirth or infant death.

Results: The case review team gained valuable insights from including the mothers’ perspective in this process. Themes from the interviews showed mothers:

- Had appreciation and desire to help improve maternal-child health outcomes
- Experienced racial discrimination and social isolation
- Had language, income and employment barriers
- Needed improved grief and bereavement support
- Wanted more information about pregnancy risks
- Provided feedback on the quality of services

The project identified recommendations that were presented to community partners and at statewide conferences. Several examples of action resulting from these recommendations include:

- Two local hospitals are working with grief and bereavement volunteers to support families that experience a loss
- Healthcare providers are identifying strategies using electronic health records to improve diabetes screening, diagnosis and management for women of reproductive age
- The Sleep Safe Sleep Well Initiative developed and implemented consistent messaging about infant sleep including a campaign in African American community churches. The messaging led to system changes in the community. One local homeless shelter and one hospital updated safe sleep policies and provided educational information to parents.

This work leveraged funding to expand the project through a 2014 Kohl’s Cares Grant through the UW Health American Family Children’s Hospital and a 2015 grant through the Madison Rotary Foundation. It is currently sustained through support from the federal Title V block grant.

Grantee: Public Health for Madison and Dane County
Academic Partner: Deborah Ehrenthal, MD, MPH, FACP, UW School of Medicine and Public Health, Department of Obstetrics & Gynecology
Dates: 7/1/2013-6/30/2016
Amount Spent: $48,470
Program: Community Academic Partnership Fund
Public Will Building to Reduce Obesity in the Latino Community of Milwaukee

**The Challenge:** Current data indicates that 31 percent of Latinos in Milwaukee’s neighborhoods are obese. This project wanted to engage the Latino community to collect their ideas for how to address and combat these statistics. The project team learned that a priority was to improve usability of outdoor spaces in targeted neighborhoods so that communities can increase physical activity.

**Project Goal:** The project trained Latina Community Health Promoters (Mujeres con Poder) and a Latina Community Action Board (CAB) to engage community members to take action by building public will toward:

- Implementing an action plan to address and improve environmental determinants of obesity
- Building community organizing capacity to influence policy towards creating lasting change in neighborhoods
- Creating an evaluation framework to measure the public health impact of community organizing efforts

**Results:** CAB and Mujeres con Poder learned that one way to increase opportunities for physical activity was to improve the overall physical environment of neighborhoods by reducing trash build up and increasing recycling. The project activities included raising awareness about the importance of recycling, making connections with government and city officials, advocating for more recycling containers and working with businesses and community organizations. They created an evaluation framework and identified a number of indicators leading to successful policy change in their neighborhood.

The Mujeres con Poder and CAB members actively sought out opportunities to approach community leaders (e.g., church leaders, business owners, elected officials) to discuss the issue of garbage and recycling and how these environmental factors affect the health of their community. This project also built awareness through media and community events, totaling approximately 265 one-on-one interactions at community events.

In July, the Mujeres con Poder received funding from the Aetna Foundation to continue their work into 2018. The group will also be working to broaden participation in order to advocate for city budget dollars to support the Mujeres con Poder and their outreach and engagement activities.

Building capacity within communities to create their own change leads to sustained impact.
Yoga’s Effect on Fall Risk Factors in Rural Older Adults

The Challenge: According to the Centers for Disease Control, one out of three adults, age 65 and older, falls each year. Currently, 14 percent of Wisconsin’s population is over 65; this will increase to 21 percent by 2030. Falls are the leading cause of injury and deaths among older adults. Many people who fall, even if they are not injured, develop a fear of falling. This causes them to limit activities, and further reduces mobility and physical fitness.

Project Goal: Practicing yoga can lead to improved balance, flexibility, range of motion and strength, reducing the likelihood of injuries. Preliminary research shows that yoga interventions can reduce fear of falling and improve balance in older adults. However, further randomized trials are necessary to confirm this preliminary information. Thirty-eight participants were enrolled in the randomized intervention and completed the intervention in rural Grant, Iowa, and Green counties (79 percent of participants were female and 100 percent non-Hispanic white). Half were assigned to the free yoga classes.

Results: The interventions were proven safe, with no adverse consequences. As most participants were fit, scores had limited range to increase, but did improve on balance and gait assessments. Six months prior to the study, 15 participants reported a total of 27 falls, compared to 11 participants with 15.5 falls after the study.

The project successfully established a baseline of data and tools to conduct a larger randomized trial in the future. The group is seeking further funding to conduct a larger study with more robust falls measurements. It is also preparing a publication.

Grantee: Aging and Disability Resource Center

Academic Partner: Irene Hamrick, MD, UW School of Medicine and Public Health and Paul Smith, MD, UW School of Medicine and Public Health


Amount Spent: $48,364

Program: Community Academic Partnership Fund
Grantee: Wheaton Franciscan Healthcare – All Saints
Academic Partner: Teresa Johnson, PhD, UW-Milwaukee, College of Nursing
Dates: 7/1/2013-6/30/2016
Amount Spent: $116,883
Program: Lifecourse Initiative for Healthy Families

The Challenge: The greater Racine area has one of the highest rates of infant mortality among African American and Hispanic women in Wisconsin, due in large part to disproportionate rates of prematurity. The CenteringPregnancy (CP) program has demonstrated a positive impact to help reduce disparities in birth outcomes among African American women.

Project Goal: The project used CenteringPregnancy, a program where expectant mothers, who are due at the same time, meet as a group with their physician. Each session included private time with the physician for exams; however, additional questions, concerns and solutions as well as general educational topics were discussed in a group setting. Topics included nutrition, breastfeeding, family relationships, labor, delivery, hospital procedures, infant care and feeding, postpartum experiences and more.

Results: CenteringPregnancy was completed by 420 women. CP was offered to all women, with primarily only white women initially enrolling. Significant efforts were made to provide culturally responsive outreach and marketing to women from groups with higher rates of infant mortality. As a result, 21.7 percent of the total women enrolled identified as African American and 20.7 percent identified as Hispanic.

The CP program found that women who participated had a rate of preterm birth at 4.2 percent while the national average is 11.5 percent. In addition, 73 percent of women in CP planned to breastfeed compared to 50 percent of women who did not participate in CP.

The project was successful at creating system change. Nurses changed their early pregnancy education to group sessions, informing patients about CenteringPregnancy, resulting in higher patient demand and more physicians trained in CP. Eleven obstetricians, including three African American obstetricians, were trained in facilitating CP groups.

The national average preterm birthrate is 11.5%.
After participating in this Centering Pregnancy Program, participants had a 4.2% preterm birth rate.
Healthy Families Kenosha

The Challenge: In recent decades, African American families in Kenosha County experienced infant mortality at two to three times the rate of White families. The Kenosha Lifecourse Initiative for Healthy Families’ community assessment identified needs for increased services for prenatal, preconception and interconception care and connecting new parents with parenting education/services.

Project Goal: The Healthy Families Kenosha (HFK) Program aimed to improve parent-child interactions, prevent child abuse and neglect and promote optimal child development. The project worked with participating families to identify needs and goals and conducted intensive home visiting (based on the well-validated Healthy Families America model) and provided other services to new parents or referred them to other organizations.

Results: HFK was originally designed to deliver parenting education, but staff quickly realized that many families had more critical issues. Over two-thirds of families needed assistance finding adequate housing. Almost the same number wanted help finding a decent job. Over half needed help learning how to maintain a household budget, and just under half needed medical services.

The program reached a highly stressed, low-income group comprised of 47 women, 13 men, 48 babies and 62 siblings/other children. On average, families participated in the program for 10 months and received nearly 40 hours of direct contact per participant.

Families who received home visits prenatally were almost three times more likely to stay in the program and attain goals than families who started after the child’s birth. Thus, the program aimed to recruit expecting families and were able to in 45 percent of cases.

Throughout the course of the program, 60 percent of families completed the program, a high rate for a population of individuals who have significant needs. Of those who completed, 28 percent attained some or all of their goals. The remaining 32 percent moved out of Kenosha County to be closer to supportive family. This was encouraged by the program and considered a success.

Ten mothers were surveyed using the Adult-Adolescent Parenting Index before and after the intervention. Total average scores in parenting competence improved. Parenting competence is linked to less child maltreatment and infant mortality.

The grantees received significant funding from the Child Abuse & Neglect Prevention Board to sustain their culturally appropriate parenting education programs.
Healthy Parents, Healthy Babies (Healthy Next Babies)

The Challenge: The infant mortality rate for babies born to African American women is nearly three times that of their white counterparts in Milwaukee. Women who have experienced a premature birth are twice as likely to experience a second adverse birth. Improved health care strategy is needed to help close the infant morbidity and mortality gap.

Project Goal: The goal of Healthy Families, Healthy Next Babies (Healthy Next Babies) (HNB) project was to use an innovative model to decrease adverse birth outcomes among low-income African American mothers who are more likely to be at-risk for poor outcomes in a subsequent birth. Through family planning, health education, self-care and family/father support services, the project tended to the health of the mother and her newborn, and encouraged behaviors that would contribute to the healthiest possible pregnancy and birth in the future. The project developed, implemented and evaluated this model for African American women who had an infant currently in the Aurora Sinai Medical Center’s Neonatal Intensive Care Unit (NICU).

Results: The project improved care and maximized existing services for African American mothers during the interconception period to develop skills to become adept at self-care.

Sixty-nine participants (goal: 40) were served with:

- 650 home visits
- 1,441 hours of direct delivery
- 2,794 in-person interventions (face-to-face or via telephone).

Ninety-four percent of mothers who participated in the evaluation (n = 34) delayed an additional pregnancy by at least 12 months. In addition, mothers were assessed for capacity to address stressors in their lives and thirteen (76.5 percent) had a positive change in stability (employment, housing, finances, child development, relationships, etc.) at follow-up while only four had a negative change.

HNB also achieved its goal to strengthen father involvement in African American families. The project successfully connected fathers to community resources and to their families. The fathers received support in men’s health, employment services, parenting, child support, housing, education and more.

HNB achieved system change as Aurora Health Care and Aurora Family Service (AFS) have continued providing Healthy Next Babies services to more than 24 new moms and their NICU infants since the grant ended. The NICU families now represent 23 percent of all home visitation services. The grant has allowed for ongoing collaboration with Aurora Sinai Medical Center NICU, enabling systemic change in follow-up home-based services to the most vulnerable families.
Implementation of a Rock County Fetal Infant Mortality Review Team

The Challenge: Rock County has one of the highest rates of African American infant mortality in the state of Wisconsin at 17 deaths per 1000 births. Although Rock County has had a child death review team since 2006, there has been no analysis of fetal death such as stillbirth and death due to extreme prematurity, a primary cause of death in the African American community.

Project Goal: This project aimed to develop and implement a Fetal Infant Mortality Review (FIMR) team in Rock County. FIMR is an action-oriented community process that reviews all fetal deaths over 20 weeks gestation and infant deaths up to age one. Eight maternal and paternal interviews were conducted and de-identified data was collected. All data was reviewed by the FIMR team and the African American Service Advisory Team, providing additional cultural perspective to the unique issues of African American health in the community.

Results: The project identified a need to improve the cultural competence of Rock County health systems, promote safe sleep practices, encourage interpregnancy spacing and provide grief resources. As a result, Rock County Public Health Department has implemented the Sleep Baby initiative with area hospitals and other community agencies. Safe sleep trainings are held with Child Protective Services staff, Women, Infants, and Children staff and hospital staff on obstetrical and pediatric floors at the hospitals in Rock County. Area hospitals are considering changes around current safe sleep policies to incorporate uniform messaging and best practices.

Additionally, there is a great difference between the care in the maternity/labor unit delivering a stillborn versus the emergency room. Many grief resources are only offered in the maternity unit. None of the local hospitals have a set protocol related to emergency room staff and their support role. The hospitals on the FIMR team are working together to improve this.

The partnerships and relationships established through the FIMR team have been vital to broadening this initiative to make systems-level changes. The FIMR team hopes to engage team members from each health system going forward.
Reducing African American Infant Birth Disparities through Decreased Prison Recidivism and Increased Living-Wage Employment of Mothers and Fathers

The Challenge: Imprisonment rates have been growing steadily since 1973, while the racial makeup of prisons has shifted towards an increasingly large proportion of African American inmates. Previous studies have found that parental incarceration increases the probability of infant death by 29.6 percent and that infants of recently incarcerated fathers have 90 percent higher odds of post neonatal mortality than otherwise comparable infants (Wildeman, 2010). By helping formerly incarcerated parents develop skills, get jobs and abate anti-social thinking patterns, Racine Vocational Ministry is combating one of the many major underlying causes of African American health disparities in birth outcomes.

Project Goal: The project provided 54 African American individuals who were previously incarcerated and their families an array of programming including life skills development, cognitive interventions, intensive case management, temp-to-work job training, permanent job placement and employment and educational support.

Results: Fifteen percent of clients had jobs at program entry and Racine Vocational Ministry was able to place 64 percent into employment at six months. Clients entered the program with high levels of depression, anxiety and stress. These conditions were reduced slightly at six months, but markedly reduced after one year. Working clients reported lower levels of depression and anxiety than those not working.

In Wisconsin, previously incarcerated individuals recidivate at a rate of 15 percent after one year, 24 percent after two years, and 32 percent after three years. The clients in the program recidivated at much lower levels of 7 percent, 11 percent and 14 percent. Reduced recidivism translates to stable jobs, family systems and the ability to live in more social and civically engaged ways.

A policy to encourage clients to garner new friendship networks reinforced the science that social networks positively impact attitudes and behaviors. In addition, clients stated they have strong support from family, friends and their significant others. As social networks expanded and deepened, family relationships frequently saw a correlating improvement.

Despite the small sample size, outcomes from this study are encouraging. Previously incarcerated individuals can be integrated into the community with support from agencies and programs that offer them practical job skills, cognitive programming and training in ‘soft skills’ that are important to career development. As families become more economically stable and engage the community in more social ways, stress is reduced. A reduction in chronic stress encourages healthy family systems that allow for healthy birth outcomes.
Striving to Create Healthier Communities through Innovative Partnerships

The Challenge: For the last two decades, Wisconsin has seen little improvement in the rate of African American infant deaths. Wisconsin ranks as one of the worst states in African American infant mortality, with the majority of these deaths occurring in Milwaukee.

Project Goal: Striving to Create Healthier Communities embraced the vision of the Milwaukee Lifecourse Initiative for Healthier Families (LIHF) Collaborative that all African Americans in Milwaukee have healthy birth outcomes and less stress. The project tested Birthing Project USA, the only national African American maternal and child health program in the nation. They recruited and trained 28 community volunteers to serve as Sister Friends. These volunteers provide psychosocial support to 20 Little Sisters—pregnant African American women in Milwaukee.

Results: Data indicated that Little Sisters benefited from participating in the project. Milwaukee’s rate of pre-term birth is 12-14 percent, but only 10 percent of babies born from Little Sisters were preterm. Participants reported more strong and helpful relationships—demonstrating that the program creates space for development of important connections and social support. The program also provides vital links to community resources and opportunities for personal growth and development.

The inconsistency of the Little Sisters’ participation in the project was a challenge. The project identified two related needs that affected participation: housing and incarceration. Policies that support pregnant women and women with young children in identifying safe and affordable housing are needed in order to address poor birth outcomes. Secondly, alternatives to incarceration are needed so that fathers are not incarcerated for petty crimes and are available to provide support to their pregnant partners and their children.

The Lovell Johnson Quality of Life Center established new partnerships with the Parenting Network and Planned Parenthood and have identified further potential partners. The project is seeking funding to sustain its work and two manuscripts have been submitted for publication.
The Wisconsin Surgical Coaching Program

The Challenge: Recent studies have demonstrated the importance of a surgeon’s technical skill and teamwork in determining patient outcomes although limited opportunities exist to improve skill once formal training is completed. Surgical coaching has the potential to address limitations in current approaches to continuing medical education, which often does not incorporate the critical concepts of adult learning theory.

Project Goal: The Wisconsin Surgical Coaching Program pairs surgeons with a trained surgical coach to improve their technical, cognitive and interpersonal skills. The project aimed to:

- Identify key coaching principles in other highly technical disciplines
- Develop and pilot a video-based coaching program for Wisconsin surgeons
- Evaluate the educational value of the video-based coaching program

Results: The project initially studied athletes, teachers and musicians and constructed a framework to guide design and development of coaching interventions in procedure-based health care. The framework identified three domains to target for performance improvement: technical skill, cognitive skill and nontechnical skill (e.g., leadership skills). The framework included the coaching steps of setting goals, encouraging and motivating and developing and guiding.

Peers nominated eight surgeons to serve as coaches. Coaches received training, rooted in the framework that included interactive discussions of peer-coaching principles and role expectations. Twelve surgeons representing a variety of practice settings throughout Wisconsin volunteered to be paired with surgical coaches. The coaching sessions were video recorded and analyzed to identify positive strategies and potential pitfalls for coaching. Positive strategies included framing coaching as a partnership and making the coachee responsible for self-directed learning. Potential pitfalls included offering premature advice; equating coaching with teaching residents or medical students and appearing ill-prepared to facilitate the conversation.

This program generated national interest and five additional coaching initiatives with the University of Michigan, Northwestern University, the Americas Hernia Society Quality Collaborative, Project ADOPT (Assuring and Defining Outcomes through Procedural Training), and adapting from interest in Project ADOPT, creation of a national program, the Laparoscopic Total Extraperitoneal Hernia Course with SAGES, supported by Medtronic. In addition, investigators are currently working with D2P (Discovery to Product), a partnership between UW-Madison and the Wisconsin Alumni Research Foundation (WARF), and other potential collaborators, to develop a sustainable dissemination model for this work.

The project has leveraged almost $3 million, including two R01 grants, to further expand surgical coaching. The project has resulted in four published manuscripts, eight poster and five oral presentations at local and national conferences, and more than 30 invited research presentations, national and international visiting professorships and grand rounds.

Grantee: Caprice Greenberg, MD, MPH, UW School of Medicine and Public Health, Department of Surgery; Douglas Wiegmann, PhD, MS, UW-Madison College of Engineering

Dates: 12/1/2012–11/30/2016

Amount: $497,092

Program: Collaborative Health Sciences Program

The Wisconsin Surgical Coaching Program has been sustained and expanded, receiving almost $3 million in additional funding.
Discharge Order Completeness and 30-Day Rehospitalizations in Rural Wisconsin Nursing Home Patients

**The Challenge:** One in four Medicare patients discharged to nursing homes is rehospitalized within 30 days. In Wisconsin, more than 31,000 older adults receive care in nursing homes each year, with rehospitalizations costing over $30 million annually.

Patients rely on the hospital to fully communicate care plans to nursing homes, most often through discharge orders, which convey information such as medications, activity level and medical follow-up. Nursing homes use discharge orders to create a plan of care for the patient. If orders are omitted, patients may receive sub-optimal nursing home care leading to rehospitalizations. However, evidence linking the completeness of discharge orders to patient outcomes is lacking.

**Project Goal:** The project aimed to better understand whether incomplete orders affect patient outcomes. Specifically, the research team looked at:

- The extent to which omissions of discharge orders for Warfarin instructions, activity level and medical follow-up impact local 30-day rehospitalizations in patients discharged from rural, community-based Wisconsin hospitals to nursing homes. Discharge orders and work-process data were abstracted for a random sample of patients discharged to nursing homes from three community-based rural Wisconsin hospitals and linked to local rehospitalization and provider data.
- Whether hospitals workflows and provider training/specialties impact discharge order completeness in these rural Wisconsin hospitals. Sixty-four providers participated in focus groups as part of this assessment.

**Results:** Communication of physical therapy recommendations between hospitals and nursing homes was very poor and associated with a trend towards worse 30-day outcomes. Discharge orders most frequently omitted recommendations for assistance required for mobility (nearly 100 percent), followed by recommendations for use of assistive devices (88 percent) and maintaining patient safety (68 percent).

The project also demonstrated that 23.7 percent of patients had all Warfarin discharge communication components missing from their hospital discharge summaries/orders. Omission of essential discharge communication regarding Warfarin management in patients transitioning to nursing homes was associated with increased risk for poor 30-day outcomes, including rehospitalization and mortality.

Finally, the project produced a new method for researchers to increase reliability when abstracting unstructured electronic medical record-based data (e.g., text data) across multiple sites. Currently, three publications and two presentations have resulted. This work will continue to inform the development of quality measures, interventions and patient care guidelines to enhance the transitional care quality of nursing home patients in Wisconsin and beyond.

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**Grantee:** Amy Kind, MD, PhD, UW School of Medicine and Public Health, Department of Medicine

**Dates:** 7/1/2013-6/30/2016

**Amount Spent:** $99,104

**Program:** New Investigator Program
Mechanistic Insights into the Role of Grainyhead Proteins in Neural Tube Closure Defects

The Challenge: During embryonic development, one of the most common and crippling human birth defects results from the failure to properly form the neural tube. Irregularities in this process can cause a wide range of defects, including herniation of the spinal cord, absence of major portions of the brain, and protrusions of the brain through the skull. While some environmental and genetic factors influencing neural tube closure have been identified, children continue to be born with neural tube defects. Infant mortality rates from neural tube closure defects are 11.1 per 100,000 live births in the state of Wisconsin for 2005-2008. This rate is more than twice that of other states, and higher than the national average of 9.2 per 100,000 live births.

Project Goal: The project aimed to understand the molecular events underlying neural tube closure with the ultimate goal of decreasing the rate of these crippling birth defects. Specifically, they studied a transcription factor family, Grainyhead (GRH), known to cause folate-resistant neural tube closure defects in preclinical models.

Results: The project identified thousands of genes controlled by GRH. The team further researched how the GRH protein activates and represses sets of genes. Grainyhead binding to DNA is remarkably constant across embryonic development, but the absence of Grainyhead changes gene expression dramatically over those same time points. This research helped to determine the functional roles of the GRH protein in the hopes of ultimately defining a genetic cause for neural tube defects and suggesting possible treatments or preventative measures.

The investigator collaborated with international faculty experts to assist with the highly complex analyses. The generated data resulted in a published manuscript as well as a poster presentation and served as the foundation for a funded grant from the American Cancer Society.
Nanoparticles for Treating Restenosis: Sustained and Targeted Local Drug Delivery

The Challenge: Each year more than one million vascular reconstructions are performed in the United States to treat cardiovascular disease. Such surgical procedures can trigger intimal hyperplasia that narrows blood vessels, leading to restricted blood flow. Current methods of preventing intimal hyperplasia cannot be applied in certain procedures such as bypass and vascular access for dialysis. Additionally, there are no methods of drug delivery that offer sustained drug release or target specific cells.

Project Goal: The project aimed to use nanoparticles in hydrogel to facilitate sustained release of rapamycin and target drug delivery to vascular smooth muscle cells. Rapamycin is a compound used to help prevent intimal hyperplasia.

Results: The project was able to increase release time of the drug from two weeks to three months using a new type of nanoparticle combined with a durable hydrogel. Even three months after its application in preclinical models, intimal hyperplasia remained at a very low level. The nanoparticles were able to target smooth muscle cells in the culture dish.

This successful project will, in the long term, lead to a drug delivery method that benefits patients undergoing vascular surgery. The project was sustained with a $2.5 million National Institutes of Health R01 grant. Thus far, three publications and six presentations from local to international settings have resulted.
Understanding HIV-1 Cell-to-Cell Transmission

The Challenge: Despite the availability of combined antiretroviral therapy, HIV-1 infection remains a growing problem in Wisconsin with particular impact on underrepresented populations with limited access to quality healthcare. More than 6,000 Wisconsinites are living with HIV with about 200 new infections diagnosed each year. Antiviral therapy can slow progression to AIDS but does not cure infection. Complications from drug therapy, the high cost of treatment, issues of multi-drug resistance and the lack of a vaccine demonstrate a continuing need to identify new treatment strategies. Recent research suggests a direct cell-to-cell mode of spread of HIV-1 may contribute to the persistence of HIV-1 infection. A thorough understanding of this process is crucial for the development of new treatments that will abolish HIV-1 transmission and persistence.

Project Goal: The project aimed to determine the:

1. Mechanism of human immunodeficiency virus type 1 (HIV-1) cell-to-cell transmission
2. Impact of HIV-1 infection on cell-to-cell interactions in the context of a complex cell population

Results: This project resulted in powerful new techniques for studying HIV using advanced live cell imaging. A cutting-edge model was established for studying HIV pathogenesis in tissue microenvironments. Moreover, they discovered new roles for two viral proteins, Gag and Envelope, in driving the formation and turnover of the synapses in which the virus spreads. They also identified unanticipated roles of proteins that regulate the spread of infection. These findings inform new ongoing work to disrupt these new virus-host interactions toward new antiviral strategies.

The first phase of this work was published in 2016 in the *Journal of Virology* and two additional manuscripts and a review are in preparation. The project received two additional grants totaling more than $320,000 to sustain its work, has submitted for further funding and applied for a patent.
Building an Accessible Database of Patient Experience for the U.S.

The Challenge: Patients and caregivers facing a new diagnosis or making a health-related decision often value other people’s experiences with the same diagnosis. There is growing awareness of the importance of internet-based patient experience information in shaping patient’s decisions about treatment choices. In nine other countries, a Database of Information about Patient Experience (DIPEx) –developed by researchers at Oxford University—has impacted patients, clinicians, quality improvement professionals, clinical educators and policymakers.

Project Goal: In combination with funding from other partners, the project aimed to make the UW School of Medicine and Public Health the host institution to launch DIPEx-USA, a network and website for researching patient experiences. The project also aimed to pilot the first DIPEx-USA module focusing on depression in young adults. This group often receives inadequate treatment and could benefit from understanding other people’s experiences of diagnosis and treatment.

Results: The project established a first-of-its-kind network and website in the United States on patient experiences. The Health Experiences Research Network (HERN; formerly called DIPEx-USA) is a partnership between four universities: University of Wisconsin-Madison, Oregon Health and Sciences University, Johns Hopkins University and Yale University. HERN received approval as the tenth international member and became the U.S. representative to DIPEx International. The HERN network created and launched healthexperiencesusa.org.

The first module “Young Adults’ Experiences with Depression” includes 250 video, audio and text clips. It was developed using 40 in-depth interviews with young adults with depression. The research team also worked closely with an inclusive advisory panel including patients with depression.

The website is currently being disseminated nationwide through a combination of publications and presentations, along with social media and advocacy group partnerships. In summer of 2017, a Traumatic Brain Injury module, which will be developed in partnership with the UW Department of Veterans Affairs, will be launched and a minimum of six additional modules are anticipated over the next three to five years.

There has been widespread national and international recognition of the importance of this work as evidenced by many invited local, national and international presentations. The project is sustained with pilot funding from the Macy Foundation to test a curriculum based on the depression module and the UW Institute for Clinical and Translational Research for disseminating the depression module. In addition, the team has submitted several other grant applications, and anticipates submitting proposals for federal funding in the next couple of years.

Grantee: Nancy Pandhi, MD, PhD, MPH, UW School of Medicine and Public Health, Department of Family Medicine and Community Health and Rachel Grob, PhD, MA, UW School of Medicine and Public Health, Department of Family Medicine and Community Health


Amount Spent: $45,000

Program: PERC Opportunity Grant

The project established a first-of-its-kind network and website in the United States on patient experiences.