

**AHW ACCOMPLISHMENTS  
USING OUTCOMES FROM  
AHW 2014-2018  
FIVE-YEAR PLAN**

*JUNE 2018*



# TABLE OF CONTENTS

I. The Advancing a Healthier Wisconsin Endowment Overview .....	1
II. Executive Summary .....	2
III. Healthier Wisconsin Partnership Program: Partner-Reported Accomplishments Using Outcomes from AHW 2014-2018 Five-Year Plan (80 projects) .....	3-12
IV. Research and Education Program: Partner-Reported Accomplishments Using Outcomes from AHW 2014-2018 Five-Year Plan (47 projects) .....	13-19

# I. ADVANCING A HEALTHIER WISCONSIN

## ENDOWMENT OVERVIEW

### Mission

Work with our partners to serve as a catalyst for positive change in the health of Wisconsin communities

### Vision

A healthier Wisconsin

### Principles

**Collaboration**—supporting effective collaboration between community and Medical College of Wisconsin partners to broaden program impact throughout the state and to enhance the translation of knowledge into community practice

**Transformation**—effecting systemic change by emphasizing prevention, innovation, and capacity building and identifying initiatives that will enhance the health of our community through research, education, and service, locally, statewide and, indirectly, nationally and internationally

**Stewardship**—expecting excellence as funded projects measure and account for outcomes through effective oversight and rigorous evaluation and maximizing impact as priorities are identified, new knowledge is generated, translated, and disseminated, and additional resources are leveraged to support continued success

### Healthier Wisconsin Partnership Program (HWPP)

- ◆ Promotes public and community health and disease prevention initiatives in Wisconsin through support for community-based and community-MCW academic partnerships

### Research and Education Program (REP)

- ◆ Supports new scientific discovery and innovative programs that enhance the education of patients, public health professionals, health providers, residents, fellows, and medical and graduate students

### By the Numbers: 2004-2018

- ◆ \$465M in assets as of March 31, 2018
- ◆ \$233M investment in more than 380 initiatives
- ◆ More than 1,300 MCW and community partners across Wisconsin
- ◆ More than 350 faculty collaborators across 60 MCW departments, divisions, centers, and institutes
- ◆ Additional information and success stories are available at <http://www.mcw.edu/Advancing-Healthier-WI-Endowment.htm>

## II. EXECUTIVE SUMMARY

This report summarizes the accomplishments of AHW's investments for projects that were funded during the 2014-2018 Five-Year Plan or were funded through previous five-year plans but remained active during 2014-2018.

Accomplishments have been categorized based on the six outcomes identified in AHW's 2014-2018 Five-Year Plan to articulate the value of AHW's investments to improve health of the residents of Wisconsin.

**Outcome 1: Translation and dissemination of new knowledge** AHW is committed to investing in and communicating effectively about cutting-edge and complex information resulting from AHW investments so that it can be readily accessed and used to generate new discoveries and inform programs, policies, and practices that result in improved health. Translation includes how knowledge transfers along an iterative and bidirectional continuum from the discovery of scientific innovations to its application in the real world. AHW has provided foundational support to establish the Clinical and Translational Science Institute (CTSI) at MCW, CTSI Pilot and Translational Awards Program to support teams of scientists from multiple institutions and the community, and degree granting programs for physician scientists and early career investigators.

**Outcome 2: Promotion of effective partnerships** AHW is committed to investing in strong partnerships with demonstrated skills, knowledge and infrastructure to lead and advance their work to the next level. During the 2014-2018 Five-Year Plan, AHW continued to invest in cross-sector partnerships with community and academic researchers through HWPP investments, initiation of new REP funding mechanisms supporting cross-departmental teams of MCW faculty, and expansion of partnerships between communities, educators, and researchers with the behavioral health and cancer disparities initiatives to collaborate to address complex issues.

**Outcome 3: Development of effective programs, policies and practices** AHW provides support to enable networks to implement changes in policies, practices, and environments that influence health behaviors and outcomes. Through long-term investments in projects and initiatives, AHW allows for more meaningful and sustained impact on health and intentional incorporation of planning phases and opportunities to build evidence to support lasting change.

**Outcome 4: Strengthening of community and academic capacity to address Wisconsin's health needs** AHW supports communities, researchers and educators to more effectively define, assess, and act on key health issues in

Wisconsin. Through structured investment opportunities emphasizing sustainable solutions through policy, systems, and environmental changes, cross-sector partnerships and development of Wisconsin health workforces, AHW supports capacity building across sectors to address Wisconsin's leading health needs.

**Outcome 5: Cultivation of leadership in public health and research** AHW inspires and invests in building the knowledge, skills, and experiences of emerging and existing leaders across education, research and community so that they can be active and effective changemakers influencing within and outside of their fields. AHW has supported leadership development through many investments, including a funded planning phase for the long-term behavioral health initiative positioning participants as community leaders in the effort, recruitment of emerging and existing leaders, and support of pipeline programs and mentoring initiatives to build the next generation of leaders.

**Outcome 6: Development of innovative research and discovery** AHW provides support for optimal conditions that enable AHW's partners to discover new concepts and research, push existing concepts forward through replicating, scaling and applying existing approaches to new populations and problems. AHW supports early stage innovation and invests in planning processes that lead to scaling and widespread adoption.

**2014-2018 Accomplishments.** As demonstrated in this report, AHW investments have had a significant impact on the health of communities across Wisconsin. Accomplishments reflect AHW's investment in more than 125 initiatives.

**Future Directions.** Although impressive, these accomplishments only begin to identify the value that can be gained from AHW's investments. As we move towards implementation of our fourth AHW Five-Year Plan, we will explore new strategies and opportunities that reflect our continued expansion from funding and administering awards to being a catalyst for positive change. Key to our success will be our ability to measure the value of AHW's investments, not only during the life of the funding period, but well beyond in the years to come.

As we move into our next five years as changemakers, AHW will be positioned to translate our collective strategies for health improvement into a transformative impact.

### III. HEALTHIER WISCONSIN PARTNERSHIP PROGRAM:

*Partner-Reported Accomplishments Using  
AHW's Outcomes from the Third Five-Year Plan (2014-2018)*

#### Overview

Since 2004, Healthier Wisconsin Partnership Program (HWPP) has awarded more than \$70M to 186 community-based and community-MCW academic partnership initiatives that are aligned with the state health plan.

80 projects were either newly funded during the 2014-2018 Five-Year Plan or were funded through previous five-year plans but remained active during 2014-2018. Of these, 39 are completed and the remainder are active projects.

The following summarizes the partner-reported accomplishments to date from these 80 initiatives. Project accomplishments have been categorized into one of the six outcomes from AHW's 2014-2018 Five-Year Plan. While projects have outcomes in several areas, for the purposes of this report, each project is categorized into one primary area based on its major outcomes.

#### AHW'S OUTCOMES FROM THE 2014-2018 FIVE-YEAR PLAN FOR HEALTHIER WISCONSIN PARTNERSHIP PROGRAM

<b>Outcome.....</b>	<b>80 Projects</b>
Translation and dissemination of new knowledge.....	6 Projects
Promotion of effective partnerships.....	17 Projects
Development of effective programs, policies and practices.....	34 Projects
Strengthening of community and academic capacity to address Wisconsin's health needs.....	12 Projects
Cultivation of leadership in public health and research.....	7 Projects
Development of innovative research and discovery.....	4 Projects
<b>Total 80 Projects</b>	

# HEALTHIER WISCONSIN PARTNERSHIP PROGRAM

## *Partner-Reported Accomplishments using AHW's Outcomes from the Third Five-Year Plan (2014-2018): Selected Set*

### **Translation and dissemination of new knowledge**

- ◆ Creation of a coordinated response to making resources, guidelines, and ongoing training available to address the mental health, physical, and social needs of youth at risk of or involved with sexual exploitation.
- ◆ Creation of an aggregated data and connected technology system linking 3 forensic-centric agencies: justice, emergency operations, medical examiner; allowing collaborative solutions for predicative and strengthened decision-making in reducing opioid overdoses

### **Promotion of effective partnerships**

- ◆ Created Food Hubs at existing Food Banks with food-related infrastructure to distribute healthy food to underserved populations, repair fragmented food systems, and help communities improve overall health and nutrition.
- ◆ Developed a community/school collaboration model for implementation and expansion of the Honest, Open, Proud (HOP) program statewide to empower Wisconsin youth to make strategic decisions on whether and how to disclose mental health challenges

### **Development of effective programs, policies and practices**

- ◆ Promoted child and family resiliency through integration of trauma-informed principles into Wisconsin's child welfare policies and practices to mitigate the short/long-term social, emotional and health effects of childhood toxic stress.
- ◆ Improved child and family health and well-being through integration of trauma-informed principles into Wisconsin's child welfare policies and practices in order to mitigate the short- and long-term social, emotional and health effects of childhood toxic stress.

### **Strengthening of community and academic capacity to address Wisconsin's health needs**

- ◆ Increased the odds of sudden cardiac arrest (SCA) survival in Wisconsin by training high school students in CPR. This will significantly increase the number of CPR-instructed persons who potentially witness and respond to an SCA event.
- ◆ Embedded strengths-based, evidence informed policies and practices throughout primary prevention systems in Kenosha County to build family Protective Factors, optimize child development and address causes of child maltreatment.

### **Cultivation of leadership in public health and research**

- ◆ Expand patient access to immunizations by developing a consistent vaccination protocol and training for pharmacist-provided vaccines, and address claims policies, consequently leading to sustainable and expanded patient access to recommended vaccines.
- ◆ Strengthen the Wisconsin Free and Charitable Clinics (FCC) infrastructure by fostering a solid, sustainable nonprofit FCC model (Standards of Excellence) implementation and establishing a culture of data-collection to promote health-outcomes and high quality healthcare at FCCs.

### **Development of innovative research and discovery**

- ◆ Created a system to bridge the gap between health care delivery and the social service sector for cost savings, improved population health outcomes, and increased client experience and engagement.
- ◆ Forging broad systems-level change to reduce fragmentation and result in durable, integrated, and sustained improvement in the state's behavioral health.

# HEALTHIER WISCONSIN PARTNERSHIP PROGRAM

## *Partner-Reported Accomplishments Using AHW's Outcomes from the Third Five-Year Plan (2014-2018): Full Set (80 Projects)*

### Translation and dissemination of new knowledge

#### Completed Projects:

- ◆ Assessed efforts to increase confidence and competence among local officials and media in Eau Claire to use population health data to support decision making with findings indicating that over 80% of media stories in the first year after implementation and 37 city council and county board decisions in 2014 and 2015 included health data
- ◆ Created the Standards of Excellence to support Wisconsin's free and charitable clinics to promote population health, interrupt disease progression, and improve health outcomes and patient experience for Wisconsin's underserved and economically challenged populations
- ◆ Conducted community conversations to develop a storytelling report and community engagement toolkit to ensure that community voices are reflected in current and future health needs assessments, priority setting processes, and programming to address the health needs of all Rock County residents
- ◆ Conducted a gap analysis to determine existing mental health service gaps in Washington and Ozaukee Counties to inform the development and implementation of a mental health friendly communities model

#### Active Projects:

- ◆ Engaging transit users, pedestrians, and bicyclists in the Fox Valley region to identify factors that impact their transportation journey resulting in a summary report and long-term strategic plan to advocate for improved transit access to advance health outcomes in the region
- ◆ Transferring knowledge among communities and growing collaboration across the state to conduct restaurant nutrition environment assessments, develop restaurant partnerships and commitments, and create a collaborative roadmap for change to transform the Wisconsin kids' meal landscape

### Promotion of effective partnerships

#### Completed Projects:

- ◆ Convened multiple stakeholders representing five community sectors to explore solutions to reduce teen pregnancy and STIs in Milwaukee through model policies within schools and youth serving agencies that support the distribution of condoms by youth health workers to their peers

- ◆ Convened partners to negotiate terms for eligible cases and improved data regarding the extent and nature of outstanding arrest warrants in an effort to build capacity for collaborative policy development between faith, criminal justice and organizing sectors to support residents to resolve legal issues associated with outstanding arrest warrants
- ◆ Cultivated relationships and trust among health and community decision-makers to support efforts to incorporate health impact and health outcomes as part of community planning for the built environment in Eau Claire
- ◆ Created a community coalition of diverse stakeholders to identify a target indicator to improve behavioral health in the community resulting in a collaborative plan to reverse the trend of youth at risk of depression in La Crosse County
- ◆ Created a community coalition of diverse stakeholders to identify a target indicator to improve behavioral health in the community resulting in a collaborative plan to reduce reported depression in 6th-12th grade students in Marathon County
- ◆ Created a community coalition of diverse stakeholders to identify a target indicator to improve behavioral health in the community resulting in a collaborative plan to reduce the incidence of per capita poor mental health days in Brown County
- ◆ Created a community coalition of diverse stakeholders to identify a target indicator to improve behavioral health in the community resulting in a collaborative plan to decrease excessive drinking among adults in Lac du Flambeau
- ◆ Created a community coalition of diverse stakeholders to identify a target indicator to improve behavioral health in the community resulting in a collaborative plan to enhance the social emotional development of 3rd-5th grade elementary school students in the Racine Unified School District
- ◆ Created a community coalition of diverse stakeholders to identify a target indicator to improve behavioral health in the community resulting in a collaborative plan to reduce the number of middle and high school age youth who are at risk for depression in the Chippewa Valley
- ◆ Created a community coalition of diverse stakeholders to identify a target indicator to improve behavioral health in the community resulting in a collaborative plan to reduce the Office Discipline Referral rate in Milwaukee Public Schools for children in pre-K through 6th grade
- ◆ Created a community coalition of diverse stakeholders to identify a target indicator to improve behavioral health in the community resulting in a collaborative plan to reduce the number of students in grades 7-12 in Calumet, Outagamie, and Winnebago Counties who are at risk for or who are experiencing depression
- ◆ Created a community coalition of diverse stakeholders to identify a target indicator to improve behavioral health in the community resulting in a collaborative plan to reduce the rate of people in Southwest Wisconsin who are experiencing fourteen or more days of poor mental health per year
- ◆ Created a community coalition of diverse stakeholders to identify a target indicator to improve behavioral health in the community resulting in a collaborative plan to reduce the number of crisis calls about behavioral health in four Northern Wisconsin counties



- ◆ Engaged diverse stakeholders to develop a framework for an online toolkit to support sustained public health dialogue on gun violence prevention in the Greater Milwaukee area
- ◆ Developed a sustainability plan to move from a coalition centric model to a community centric collective impact initiative that aligns activities, establishes shared measurements, builds public will, advances policy and mobilizes funding to support local efforts to reduce the burden of substance abuse in Marathon County

#### Active Projects:

- ◆ Creating a collective impact initiative to improve data sharing and intervene collaboratively and consistently when children experience family violence to mitigate the toxic and intergenerational effects of family violence
- ◆ Developing a community/school collaboration model for implementation and expansion of the Honest, Open, Proud (HOP) program statewide to empower Wisconsin youth to make strategic decisions on whether and how to disclose mental health challenges

## Development of effective programs, policies and practices

#### Completed Projects:

- ◆ Implemented the Alcohol Use Disorders Identification Test reaching over 273 individuals through voluntary screening and creating workflow changes to integrate screening into clinic workflows at four rural Wisconsin healthcare sites to reduce the prevalence of binge drinking in rural Wisconsin
- ◆ Established a prenatal educational and enrichment group model bringing social, emotional, and additional health services to high-risk pregnant women in urban Milwaukee and created a toolkit for community-based, patient-centered obstetrical group care for future replication at other clinics
- ◆ Implemented multiple strategies to impact the health of Milwaukee urban families via the city's complex food system, including training seven promotoras to provide adult education, developing a model for Food Policies for Latino Schools focused on nutritious, culturally appropriate options, providing Community Urban Agriculture training, and conducting waste audits to inform scale up of composting operations at one area high school
- ◆ Screened over 400 community members using retinal imaging in a community setting and provided referral to care to support preservation of vision in a high-risk population through teleophthalmology
- ◆ Enacted "Teen Intervene," an evidence-based program for early identification of behavioral health risks and intervention with adolescents, as part of school policy in all Rusk County schools with the goal to lower teen substance abuse and support youth struggling with AODA and behavioral health issues
- ◆ Enacted systems change to improve cardiac arrest survival rates by making dispatcher assisted CPR pre-arrival instructions available to all 911 callers in the county with 52 911 dispatchers trained to provide pre-arrival CPR instructions and the Milwaukee County Office of Emergency Management committed to sustaining the infrastructure

- ◆ Supported the adoption of policy changes by the Milwaukee Police Department, District Attorney's Office, and the Benedict Center to promote treatment, housing, and employment instead of arrest, fines, and incarceration among women in street prostitution to address health and safety risks among this population
- ◆ Supported 82% of participating youth serving organizations to make at least one agency-level policy or program-level practice change following use of the Youth Program Quality Intervention Planning continuous quality improvement tool to support healthy development outcomes for Milwaukee area teens
- ◆ Increased the number of Milwaukee area farmers markets that accept SNAP/EBT benefits and built capacity for markets to increase access to and utilization of farmers markets by low-income consumers resulting in a 25% increase in SNAP sales at Milwaukee County farmers markets
- ◆ Engaged in systems change efforts resulting in five pharmacy partners adopting new patient-centered medication labels designed to reduce medication errors, improve medication adherence, and improve patient satisfaction with findings at one pharmacy partners indicating an increase in patients' adherence to prescribed asthma controller medications after the new labels were implemented

#### Active Projects:

- ◆ Enrolled 76 Milwaukee properties in soil testing and landscape interventions alongside education workshops to build community and public health capacity in two Milwaukee neighborhoods to mitigate exposure to lead in the soil
- ◆ Instituting common referral tools and increasing community capacity for long-term mental health resiliency through mindfulness support to align schools, government, and community agencies in the primary prevention of suicide among youth in Jackson County
- ◆ Supporting Milwaukee Public Schools and Boys & Girls Clubs of Greater Milwaukee staff to encourage high school students to increase fitness levels and adopt an orientation to lifetime fitness through development of a Response to Intervention (RtI) Physical Education manual
- ◆ Aligning fragmented food systems through a food hub distribution model to provide diverse healthy food options to underserved populations with 59 hunger relief agencies across 18 counties receiving over 27,000 of fresh produce to date
- ◆ Creating infrastructure for schools to provide high-quality CPR training to every student to support a generational shift where all Wisconsin citizens are prepared and ready to act in order to increase sudden cardiac arrest survival with 44% of Wisconsin's school districts committed to the program and over 280 teachers from 188 school districts trained to date
- ◆ Changing institutional policy and protocols to create a Social Service Triage System in Portage County that provides coordinated screening, referrals, and intervention for at-risk families of children prenatally to age five
- ◆ Implementing a hub system in La Crosse County to bridge the gap between health care delivery and the social service sector for cost savings, improved population health outcomes, and increased client experience and engagement

- ◆ Engaging veteran-serving stakeholders from diverse, yet integrated sectors to develop and implement locally designed and informed policies to assist Veterans involved in the criminal justice system with 50 veterans served through the Veterans Treatment Initiative to date
- ◆ Building family Protective Factors, optimizing child development and addressing causes of child maltreatment by embedding strengths-based, evidence informed policies and practices throughout primary prevention systems in Kenosha County
- ◆ Creating public health-based changes in policies and protocols to increase access to safe shelter and housing for women in street prostitution to reduce their risk of violence and injury
- ◆ Implementing sustained policies and practices in health and behavioral health care organizations and selected non-clinical settings to impact working-aged adults, especially middle-aged men, and reduce the rate of suicide and self-injury in Fond du Lac
- ◆ Developing a Shared Service Network (SSN) to support screening, data-based decision making, and data sharing in the Kickapoo region to increase child care availability and provider training for healthier children
- ◆ Changing policies, procedures, and priorities at the Milwaukee Department of Public Works to build streets that support active transportation and community values to increase the number and safety of people who walk and bike and develop a culture of health
- ◆ Implementing a community-driven process to initiate smoke-free policies in tribal housing across Wisconsin to address smoking-related health disparities among American Indians in Wisconsin
- ◆ Implementing strategies to address three inter-related components of access to mental health care - acceptability, accessibility, and availability - to reduce the rate of people in Southwest Wisconsin who are experiencing fourteen or more days of poor mental health per year
- ◆ Implementing strategies to build resilience skills and positive social connectedness among youth, build capacity of informal supports, facilitate key communication improvements, and increase knowledge and improve attitudes about mental wellness to reverse the trend of youth at risk of depression in La Crosse County
- ◆ Implementing strategies to increase accessibility and utilization of on-site mental health counseling services in schools, increase knowledge and awareness of student needs, and enhance utilization of data among local organizations to more effectively allocate resources to reduce reported depression in 6th-12th grade students in Marathon County
- ◆ Implementing strategies to support employers to adopt or enhance mental health wellness programs, policies, and practices, increase community access points to mental health services and information, and develop a local workforce of employment-ready mental health counselors to reduce the incidence of per capita poor mental health days in Brown County
- ◆ Implementing strategies to create a framework for systematic cross-sector collaboration, increase access to services for underserved populations, and improve responses to behavioral health crises to reduce the number of crisis calls about behavioral health in four Northern Wisconsin counties

- ◆ Implementing strategies to change the alcohol abuse/misuse community "social norm," sustain interagency communication, resource sharing, collaboration, and service monitoring, and implement a Substance Use Community Awareness Campaign to decrease excessive drinking among adults in Lac du Flambeau
- ◆ Implementing strategies to increase student social connectedness, support healthy coping skills, screen for signs and symptoms of mental health challenges, and connect youth to mental health services to reduce the number of students in grades 7-12 in Calumet, Outagamie, and Winnebago Counties who are at risk for or who are experiencing depression
- ◆ Implementing strategies to create a school environment that supports students' social emotional health, expand school-based activities, and improve coordination and pathways to mental health services to enhance the social emotional development of 3rd-5th grade elementary school students in the Racine Unified School District
- ◆ Implementing strategies to increase capacity of the youth serving workforce to build protective factors/resilience, build staff skills that contribute to positive school climate, and create policy and change practice to reduce the number of middle and high school age youth who are at risk for depression in the Chippewa Valley
- ◆ Implementing strategies to support families to navigate available services, increase parent engagement, and expand parent-led developmental screening to reduce the Office Discipline Referral rate in Milwaukee Public Schools for children in Pre-K through 6th grade

## **Strengthening of community and academic capacity to address Wisconsin's health needs**

### Completed Projects:

- ◆ Constructed the Community Information System infrastructure and developed standard operating policies, securing and reporting procedures, and seven data sharing agreements to guide usage by systems partners to improve decision support, effective interagency coordination, and service triage in Brown County
- ◆ Conducted focus groups with women of color and low- to moderate-income unmarried women in Southeast Wisconsin and shared results with over 40 advocacy and human service organizations across the state to ensure better representation of the preferences and needs of these populations in women's health policy advocacy efforts
- ◆ Engaged key stakeholders to redesign program evaluations and improvement processes for family engagement programming to work towards sustained increases in positive health outcomes for children and families
- ◆ Developed an actionable communications plan to tell the story of the Healthy Kids Collaborative, engage and recruit active members, and catalyze movement on policy, systems and environmental change in Dane County

- ◆ Developed a shared vision and measurable action plan to identify and support unpaid family caregivers of seniors and adults with disabilities in Waukesha County who are at risk of declining health outcomes due to the stresses of caring for an aged or disabled individual
- ◆ Developed a five-year strategic action plan for the Wisconsin Native American Tobacco Network (WNATN) to prioritize and align efforts to reduce commercial tobacco-related health disparities among American Indians in Wisconsin

#### Active Projects:

- ◆ Supporting Brown County health systems to implement uniform screening protocols to support early detection of child behavioral and maternal post-partum depression and improve mental health diagnosis and care of mothers and children
- ◆ Developing an aggregated data and connected technology system to link justice, emergency operations, and medical examiner agencies to support development of collaborative solutions for predictive and strengthened decision-making in reducing opioid overdoses
- ◆ Developing an initial infrastructure and action plan to support the sustainability of the Oconto County alcohol and other drug misuse workgroup to address the root causes of community awareness/education and culture change
- ◆ Creating a coalition of local stakeholders involved in eviction and its prevention to study Milwaukee's eviction system and develop solutions for change that will affect health disparities in the region
- ◆ Engaging coalition and community members to develop a five-year action plan and budget that will determine the work of Healthiest Manitowoc County (HMC) to Achieve Healthy 25 and Achieve Healthy 75
- ◆ Collaborating to improve the overall emotional health of youth by adapting Fond du Lac's process for developing and implementing the YScreen Program to build capacity to implement universal screening practices, expand referral networks and develop the ability to evaluate outcomes in Beaver Dam and Dodge County

## Cultivation of leadership in public health and research

#### Completed Projects:

- ◆ Developed, implemented and trained home visitors and program managers to use a treatment plan algorithm to identify and support mothers with positive maternal depression screens and symptoms
- ◆ Created protocols and best practice guidelines that serve as indicators of a youth's future vulnerability of involvement in trafficking to assist medical, mental health, and service providers in identifying at-risk youth and providing necessary resources to provide comprehensive health and mental health care to at-risk youth throughout Milwaukee

- ◆ Laid the groundwork for a new integrated system of vision screening, referral, and education through training of school nurses, social workers, parent coordinators, HMO advocates, and primary care physicians around vision screening and follow-up protocols to support improved vision health for Milwaukee area youth
- ◆ Created a coordinated response to making resources, guidelines, and ongoing training available to address the mental health, physical, and social needs of youth at risk of or involved with sexual exploitation

#### Active Projects:

- ◆ Supporting teams in 14 Wisconsin counties to transform their child welfare policies and practices to incorporate trauma-informed principles aimed at mitigating the short- and long-term social, emotional, and health effects of childhood toxic stress
- ◆ Supporting increased screening capacity as a standard practice through training of 290 primary health care providers across 20 clinical sites and 128 child care providers across 4 child care centers to date resulting in a 27% increase in referrals to Milwaukee County Birth to Three in 2016
- ◆ Developing a consistent vaccination protocol and training for pharmacist-provided vaccines to expand patient access to immunizations

## Development of innovative research and discovery

#### Active Projects:

- ◆ Expanding a sustainable eye disease screening system through mobile teleophthalmology in community settings to improve health of Latino communities in Southeastern Wisconsin with 160 retinal screenings completed to date
- ◆ Fostering a solid, sustainable model to support Wisconsin's free and charitable clinics (FCCs) through scaled up implementation of Standards of Excellence in FCCs across Wisconsin and establishing a culture of data-collection to promote health-outcomes and high-quality healthcare at FCCs
- ◆ Expanding adoption of easier-to-understand labels to additional Wisconsin pharmacies to enhance health benefits, patient satisfaction, and medication adherence
- ◆ Scaling up changes to the infrastructure of all 911 call centers across Wisconsin to improve cardiac arrest survival rates by making dispatcher assisted CPR pre-arrival instructions available to all 911 callers in the state

# IV. RESEARCH AND EDUCATION PROGRAM

## *Partner-Reported Accomplishments Using AHW's Outcomes from the Third Five-Year Plan (2014-2018)*

### Overview

Since 2004, Research and Education Program (REP) has awarded more than \$162M to 197 MCW-faculty led research and education initiatives that are aligned with MCW priorities.

46 projects were either newly funded during the 2014-2018 Five-Year Plan or were funded through previous five-year plans but remained active during 2014-2018. Of these, 14 are completed and the remainder are active projects.

The following summarizes the partner-reported accomplishments to date from these 46 initiatives. Project accomplishments have been categorized into one of the six outcomes from AHW's 2014-2018 Five-Year Plan. While projects have outcomes in several areas, for the purposes of this report, each project is categorized into one primary area based on its major outcomes.

### AHW'S OUTCOMES FROM THE 2014-2018 FIVE-YEAR PLAN FOR RESEARCH AND EDUCATION PROGRAM

<b>Outcome.....</b>	<b>46 Projects</b>
Translation and dissemination of new knowledge.....	5 Projects
Promotion of effective partnerships.....	3 Projects
Development of effective programs, policies and practices.....	8 Projects
Strengthening of community and academic capacity to address Wisconsin's health needs.....	4 Projects
Cultivation of leadership in public health and research.....	3 Projects
Development of innovative research and discovery.....	23 Projects
<b>Total 46 Projects</b>	

# RESEARCH AND EDUCATION PROGRAM

## *Partner-Reported Accomplishments using AHW's Outcomes from the Third Five-Year Plan (2014-2018): Selected Set*

### **Translation and dissemination of new knowledge**

- ◆ Developing a new program focused on clinical and translational partnerships that deliver biomedical engineering solutions to clinical problems that impact the health of the people of Wisconsin.
- ◆ Creating an interdisciplinary nexus of research to improve functional outcomes in stroke survivors in Southeastern Wisconsin through clinical translational research collaborations

### **Promotion of effective partnerships**

- ◆ Creating a collaborative of multidisciplinary experts dedicated to developing, testing, and disseminating health care practice, organization and delivery strategies to improve the quality, experience, and value of care in Wisconsin.
- ◆ Improving early childhood development through better understanding the underlying causes of disparities and protective factors in Milwaukee communities with an emphasis on data systems, policies and interventions.

### **Development of effective programs, policies and practices**

- ◆ Developed a strategic plan for the creation and implementation of a community-engaged research core to align community-engaged research activities at MCW and establish a common agenda and language for community engagement.
- ◆ Developing and testing the efficacy of novel interventions designed to reach HIV-positive persons in the community, connect them to medical care, increase treatment adherence, and thereby reduce transmission of HIV disease.

### **Strengthening of community and academic capacity to address Wisconsin's health needs**

- ◆ Partnering with educational institutions to prepare underrepresented in medicine (URM) students to successfully apply to MCW to increase diversity and better address health disparities.
- ◆ Designed and developed a School of Pharmacy at the Medical College of Wisconsin to address workforce needs in rural and urban underserved communities in Wisconsin

### **Cultivation of leadership in public health and research**

- ◆ Developed a curriculum for medical students to prepare them for leadership roles in health systems, health policy, community health and advocacy for patients.
- ◆ Promoting science that seeks to translate fundamental laboratory and clinical findings into safe and effective treatments or practices by transforming the research and training environment for junior physician-scientists and supporting teams of clinical and translational researchers

### **Development of innovative research and discovery**

- ◆ Creating a research program that advances understanding of the fundamental cellular and molecular mechanisms that produce brain dysfunction in traumatic brain injury in order to develop new therapies.
- ◆ Using innovative approaches to advance precision medicine and facilitate individualized care for patients with common diseases, such as hypertension, kidney and heart disease.



# RESEARCH AND EDUCATION PROGRAM

## *Partner-Reported Accomplishments Using AHW's Outcomes from the Third Five-Year Plan (2014-2018): Full Set (46 Projects)*

### **Translation and dissemination of new knowledge**

#### Completed Projects:

- ◆ Developed a new drug discovery resource to expedite translational research in the areas of infectious disease, inflammation, cancer and nervous system decline in dementia and other diseases

#### Active Projects:

- ◆ Creating an interdisciplinary nexus of research to improve functional outcomes in stroke survivors in Southeastern Wisconsin through clinical translational research collaborations
- ◆ Developing a new program focused on clinical and translational partnerships that deliver biomedical engineering solutions to clinical problems that impact the health of the people of Wisconsin
- ◆ Developing a patient-derived xenografts breast cancer library to serve as a platform to test patient-specific hypotheses related to personalized treatment strategies for new breast cancer patients as they enter the MCW clinic
- ◆ Establishing a high throughput drug discovery resource at MCW and utilizing this resource to identify compounds that accelerate the clearance of aggregation prone proteins that cause Amyotrophic Lateral Sclerosis (ALS)

### **Promotion of effective partnerships**

#### Active Projects:

- ◆ Creating a collaborative of multidisciplinary experts dedicated to developing, testing, and disseminating health care practice, organization and delivery strategies to improve the quality, experience, and value of care in Wisconsin
- ◆ Reducing the burden of chronic disease and eliminating health disparities in high-risk minority communities through direct patient intervention, and growing the next generation of researchers to combat health disparities
- ◆ Improving early childhood development through better understanding the underlying causes of disparities and protective factors in Milwaukee communities with an emphasis on data systems, policies and interventions

## Development of effective programs, policies and practices

### Completed Projects

- ◆ Developed a strategic plan for the creation and implementation of a community-engaged research core to align community-engaged research activities at MCW and establish a common agenda and language for community engagement

### Active Projects:

- ◆ Improving cardiovascular health through innovative, cutting-edge research and cost-efficient health care by building the foundation for innovation, collaboration, and translation of research
- ◆ Developing and testing the efficacy of novel interventions designed to reach HIV-positive persons in the community, connect them to medical care, increase treatment adherence, and thereby reduce transmission of HIV disease
- ◆ Improving high-strength magnetic resonance imaging (MRI) technology and techniques to better assess cancer, inflammation, brain degeneration and brain injury
- ◆ Addressing the high rates of preterm birth and infant mortality in Milwaukee by developing refined tools to monitor the health of pregnancies, predict preterm birth and inform disease mechanism
- ◆ Developing protocols to improve planning, monitoring and adherence for physical activity in patients recovering from congestive heart failure, with the intention of using pilot data to inform construction of educational and self-management tools for a future randomized, controlled trial
- ◆ Determining the barriers and facilitators to collecting electronic patient-reported data (PatientWisdom) and whether adoption and results of use differ by race, in order to decrease disparities and improve patient-centered care
- ◆ Addressing the problem of pancreas cancer by bringing together a team of scientists that make discoveries at the cellular level, and translate these findings into new treatments for individuals with pancreas cancer

## Strengthening of community and academic capacity to address Wisconsin's health needs

### Completed Projects:

- ◆ Designed and developed a School of Pharmacy at the Medical College of Wisconsin to address workforce needs in rural and urban underserved communities in Wisconsin.

### Active Projects:

- ◆ Increasing access to quality anesthesia care through development of an innovative Master of Science in Anesthesia Program

- ◆ Partnering with educational institutions to prepare underrepresented in medicine (URM) students to successfully apply to MCW to increase diversity and better address health disparities
- ◆ Developing a strategic plan for overcoming barriers to creating and sustaining graduate medical education (GME) expansion in Central and Northern Wisconsin, which will lead to increased access to physicians for the people of Wisconsin

## Cultivation of leadership in public health and research

### Completed Projects:

- ◆ Developed a curriculum for medical students to prepare them for leadership roles in health systems, health policy, community health and advocacy for patient

### Active Projects:

- ◆ Promoting science that seeks to translate fundamental laboratory and clinical findings into safe and effective treatments or practices by transforming the research and training environment for junior physician-scientists and supporting teams of clinical and translational researchers
- ◆ Establishing a central, transformative resource that advances community-engaged research through educational opportunities and mentoring, seed grants, grant support and assistance, and increased community capacity for engaged research

## Development of innovative research and discovery

### Completed Projects:

- ◆ Uncovered specific genes that increase the risk of acute kidney injury, a potentially deadly complication that can occur along with other illnesses or during a surgical procedure
- ◆ Examined the effects of inflammatory diseases such as graft-versus-host-disease on the brain in rodents and in a clinical trial, which may lead to the development of new approaches for reducing anxiety and depression
- ◆ Developed new statistical techniques for predicting the success of stem cell transplants used to treat many disorders of the blood
- ◆ Advanced understanding of the mechanisms that protect or enhance susceptibility for development of type 2 diabetes, which will help develop new methods for preventing the disease
- ◆ Identified genes that play a major role in the development and progression of Amyotrophic Lateral Sclerosis (ALS) to understand their contributions and develop potential treatments
- ◆ Identified new approaches to regulate inflammation and cardiovascular disease through increased understanding of the role of odorant receptors (ORs), which are predicted to help blood vessels dilate and improve blood flow) in inflammation and blood vessel health

- ◆ Using a novel detection method, as well as an advanced animal model, researchers identified new, non-antibiotic treatments that limit damage and accelerate recovery from deep tissue infections
- ◆ Developed new approaches to prevent multi-drug resistant enterococci colonization and infection, rather than a treatment after infection occurs
- ◆ Increased understanding of why fat tissue located in various locations of the body differs in its ability to cause disease, which may lead to novel strategies to address obesity
- ◆ Identified an agent that activated immunity in the tumor of mice with pancreatic cancer, increasing the percentage of tumor-killing cells in the tumor, reducing tumor size, and prolonging survival

#### Active Projects:

- ◆ Improving the diagnosis and treatment of brain injuries, including concussions, and other forms of nervous system trauma by advancing knowledge about changes in brain scans, blood composition and clinical neurological testing in both acute and chronic brain injury
- ◆ Using innovative approaches to advance precision medicine and facilitate individualized care for patients with common diseases, such as hypertension, kidney and heart disease
- ◆ Using advanced magnetic resonance imaging (MRI) technique to examine brain blood flow and its relationship to functioning in athletes during recovery after sports related concussions (SRCs), in order to provide greater insight into the physiological recovery of SRC
- ◆ Harnessing the power of computational models to develop predictive computational molecular medicine tools as means of helping clinicians manage disease, focusing first on cytomegalovirus (CMV), a member of the herpesvirus family
- ◆ Determining whether specific bacterial products are contributing to inflammation and cycles of exacerbation and lung damage in cystic fibrosis patients, with the ultimate goal of identifying effective therapies and treatments
- ◆ Developing a transformative genetic screening protocol that will enable clinicians to optimize long-term outcome with precision medicine, provision of a longitudinal dataset to assess disease development and therapeutic molecular approaches, and advancement of protocols to generate improved patient-derived bioengineered cardiac tissue in vitro
- ◆ Understanding the molecular and genetic pathways that govern the differentiation process of tumor reactive CD8 T cells, a primary source for adoptive cell transfer (ACT) therapy, in order to reprogram these cells to restore and enhance their anti-tumor function to treat high-risk hematological malignancies
- ◆ Creating a research program that advances understanding of the fundamental cellular and molecular mechanisms that produce brain dysfunction in traumatic brain injury in order to develop new therapies

- ◆ Gaining better understanding of how proteins within NK and T cells that regulate cytokine production impact inflammation associated with CAR-T cell therapies, which may result in improved therapies for containing inflammation in cancer and other deleterious diseases, such as autoimmune disorders
- ◆ Understanding the contribution of endocannabinoid system dysregulation in pain processing in obese adolescents, with the long-term aim to develop novel treatments for pain in this vulnerable population
- ◆ Determining the association of dietary fructose with blood pressure salt-sensitivity in human subjects and underlying renal microvascular mechanisms by which fructose intake affects blood pressure and kidney disease
- ◆ Developing statistical methods to find a rule that assigns the optimal treatment regimen for patients with myelodysplastic syndromes (MDS), a group of diverse bone marrow disorders, as a first step toward providing clinicians guidance on designing the optimal treatment for patients with this disorder
- ◆ Creating a new Aphasia Research Program that will develop new treatments for conditions, such as stroke, epilepsy, and Alzheimer's disease, that affect memory, language, and other higher brain functions