A MESSAGE FROM THE DIRECTOR

Another academic year has passed, and the UWM campus is coming alive with new and returning student faces eager to learn and engage. Thinking of this, and in reflection of the Center’s mission and goals, it is pleasing and inspiring to reflect on the successes of our students, staff, and scientists over the past academic year.

Our courses continue to grow in number and popularity. In particular, Aged to Perfection, which was recognized for its innovative approach twice this year by nationwide gerontological organizations. More students declare our certificate programs each semester and we’ve added to our Professional Development partners, enabling us to reach even more people in the Milwaukee area. The necessity to expand critical knowledge specific to older adults and increase the number of working professionals in support of our aging society continues to escalate and, as such, the Center’s overall education efforts will continue to grow to meet those demands.

It’s also exciting to see our Scientists being recognized for their research and the impact that they have on the surrounding communities. From traffic considerations to caring for caregivers, we have scientists improving life for older adults on many fronts. These reports truly emphasize the breadth and diversity of the work being conducted.

We greatly appreciate your interest in and support of the Center, and we look forward to continuing to serve the community of older adults for years to come.

Dr. Scott Strath
Director, Center for Aging & Translational Research
University of Wisconsin - Milwaukee
ABOUT THE CENTER

Conceptualized and launched in 2013, the Center brings together multiple academic disciplines and the greater Milwaukee community, working together to provide unified and strategic advancements to aging research and education.

The aging population boom, coupled with high prevalence rates of chronic disease and disabilities, has increased the need for long-term care, resulting in soaring health care costs. As such, it becomes paramount to establish a coordinated infrastructure to advance aging research and translate findings into practice.

The UWM Center for Aging and Translational Research facilitates research, education, and training excellence and aims to translate effective interventional strategies to broadly promote successful aging in Southeastern Wisconsin and beyond. The Center is committed to fostering programs and projects that will have meaningful impact for the lives of seniors.

OUR MISSION

To establish the Center for Aging and Translational Research as a prominent Center on the UWM campus focused on research, education, training, and community outreach. Implementation of identified strategic directives will augment the Center’s role as a distinguished nucleus of gerontological excellence.

OUR VISION

To foster and pioneer innovative multidisciplinary research, education, and training that promotes successful aging with impactful community effect.

The Center staff, Center scientists and trainees will carry out the vision and mission by:

1. Developing, nurturing, growing, and sustaining a research program with a focus on aging and health;
2. Teaching and training students and professionals working with older adults;
3. Forming collaborative partnerships within UWM, Wisconsin, and the national and international communities to foster research and training specific to older adults;
4. Engaging the community to guide meaningful translation for older adult research, training, and education relevance; and
5. Strengthening financial support for the Center.
SCOTT STRATH, PH.D., FACS
Director of Education and Programming
Scott joined UWM in 2003 and is a professor in the Department of Kinesiology, Exercise Science and Health Promotion. He holds affiliate appointments with the Medical College of Wisconsin, as well as the UW-Madison. Scott co-founded the Center for Aging & Translational Research in 2013.

LYDIA LÄGUE, BA
Program Associate
Lydia has been with UWM for over 15 years, and with CATR since 2009. She is responsible for the administrative coordination for the Center, and provides direct assistance to the Center Director and Center Staff.

MEG ZIMONT, BFA
Communications & PR Associate
Meg has been working for UWM since the start of 2016 and manages the Center's external communications. She creates print and digital marketing materials for the Center, promotes our educational offerings, and manages the web and social media presence channels.

RACHELLE ALIOTO, MSW
Director of Education and Programming
Rachelle joined the Center in October 2013. She coordinates the graduate and undergraduate certificate programs, directs a curriculum committee to develop new courses, oversees the Helen Bader Scholarships for Studies in Aging, and coordinates the Center's annual professional development programming.

ERIC GRESNICK, MA, CRA
Business Manager
Eric is responsible for the full fiscal operations of the Center. He also provides guidance on grant applications and the financial management of funded grants for Center Scientists.

CHRIS CHO, MS
Center Biostatistician
Chris joined UWM and the Center in 2014. He assists Center Scientists with study design, grant preparation, data analysis, study result dissemination, scholarly publication, and preparation of data and grant reports.

HOTAKA MAEDA, MS
Graduate Research Assistant
Hotaka is a PhD Dissertator in the Department of Educational Psychology and joined CATR in 2013. He supports the Research Core and provides assistance to Core staff in the areas of database management, data maintenance, and data analysis.
**Scientists**

**Center Scientists**

**Stephen Cobb, Ph.D.,** College of Health Sciences
Associate Professor

Stephen joined the Center in February 2015. Stephen's research interests focus on the etiology, prevention, treatment, and rehabilitation of lower-extremity injury. Specifically, Cobb is interested in investigation of the pathoetiological factors and abnormal gait mechanics associated with the precipitating traumas, chronic ankle instability and ankle fracture, that lead to the development and progression of posttraumatic ankle and foot osteoarthritis.

**Wendy Huddleston, Ph.D., PT**
College of Health Sciences
Associate Professor

Wendy joined the Center in February 2016. Wendy's research uses functional magnetic resonance imaging (fMRI) and psychophysical testing to address questions regarding the cortical mechanisms involved in motor selection during visually-guided goal-directed behavior. Specifically, she is currently developing protocols to measure both eye and hand movements within the MRI environment to correlate movement accuracy with variations in cortical activity.

**Melinda Kavanaugh, Ph.D., LCSW**
Helen Bader School of Social Welfare
Associate Professor

Melinda joined the Center in December 2015. Her research focuses on families where children and youth serve as caregivers to an ill family member. She is particularly interested in the impact of caregiving on youth physical, emotional, and social development, and assessing how family context influences the reliance on youth as caregivers – including racial and ethnic differences in socioeconomic status and health care access across disease states. With programs and services for young caregivers lacking, her research is used to inform policies and develop programming to support young caregivers and their families.

**Jung Kwak, Ph.D., MSW, GSA**
Helen Bader School of Social Welfare
Associate Professor

Jung joined the Center in June 2015. Jung's primary research areas focus on long-term care policy, dementia care, and end-of-life decision making. In 2010, Dr. Kwak was selected as a Hartford Geriatric Social Work Faculty Scholar. Her recently funded research projects include a study on decision-support needs among caregivers, a decision-support coaching program for family caregivers, and a study of the effects of music on nursing home residents.

**Scott Strath, Ph.D., FACSM**
College of Health Sciences
Professor

As co-founder of CATR in 2013, Scott has been a Center Scientist since its inception. His research primarily revolves around physical activity and public health. Specific interests include the relationship between physical activity and cardiovascular health, physical activity promotional strategies, physical activity assessment, physical activity epidemiology; community and national physical activity patterns; and environmental determinants of physical activity behavior.

**Kevin Keenan, Ph.D.**
College of Health Sciences
Associate Professor

Kevin joined the Center in July 2015. Kevin's work is dedicated to understanding the interplay between motor function, physical activity, and health. Experimental procedures used in the laboratory include high-density surface EMG arrays, long-term EMG recordings, indwelling EMG recordings, force sensors, motion capture, and computational modeling.

**Ann Swartz, Ph.D., FACSM**
College of Health Sciences
Chair, Professor

Ann has been with the Center since 2013. Her research interests center on the health benefits of physical activity for adults and older adults including: relationships between physical activity, sedentary behavior, health and obesity level; novel, translational physical activity and sedentary behavior interventions to improve health, and the impact of sedentary behavior on metabolic health.

**Rhonda Montgomery, Ph.D.**
Helen Bader School of Social Welfare
Professor Emeritus

Rhonda co-founded CATR in 2013 and has been a Center Scientist since its inception. Rhonda has conducted numerous regional and national studies focused on public policy, the role of the family, and the role of staff in providing long term care. She has published over 100 articles and books. Her work has been supported by private foundations, the Alzheimer’s Association, the Administration on Aging, the National Institutes of Health, and the Health Resources Services Administration.

**Center Scientists Continuously Growing**

![Graph showing the growth of Center Scientists, Affiliated Scientists, and Schools & Colleges Represented from 2013 to 2016.](Image)
AFFILIATED SCIENTISTS

IRA DRISCOLL, PH.D.
College of Letters & Science
Associate Professor

Ira joined the Center in December 2014. Ira’s primary research focus revolves around brain changes as early predictors of cognitive deficits and dementia, and the role for hormones and genetic background as modulators of age-related cognitive decline. The function of the hippocampus and the nature of amnesia in aging and Alzheimer’s disease are of particular interest. Dr. Driscoll employs a multi-level investigative approach by combining neurogenetics, neuroimaging, and cognitive tasks that allow for cross-species comparisons.

AMY HARLEY, PH.D., MPH, RD
Joseph J. Zilber School of Public Health
Associate Professor

Amy has been with the Center since October 2015. Amy is a Registered Dietitian and trained in public health, specifically in community health education and health promotion/behavior change. Her research program incorporates both observational and intervention methods to address physical activity participation, healthy food consumption and subsequent chronic disease prevalence in low-income and racial/ethnic minority communities.

CHRISTINE KOVACH, PH.D., RN, FAAN
College of Nursing
Distinguished Professor

Christine joined the Center in 2015. Her research seeks to alleviate the range of human suffering that comes in the context of dementia. Her work is responsible for opening and researching some of the first palliative care households designed to care for people with late-stage dementia, developing the Serial Trial Intervention, and developing a model to guide research and practice on activity pacing of people with dementia.

JINSUNG WANG, PH.D.
College of Health Sciences
Associate Professor

Jinsung joined the Center in 2015. His research addresses questions such as how movement information is stored, represented and retrieved in the brain, and how such information is transferred between the two brain hemispheres. To study these questions, he often investigates how learning a novel task generalizes across different development conditions. Dr. Wang investigates these motor control/learning issues primarily with healthy young and older adults. He is also interested in other populations including individuals with Parkinson’s disease, stroke patients with hemiparesis and individuals with mild traumatic brain injury.

JULIE ELLIS, PH.D., RN, GCNS-BC
College of Nursing
Assistant Professor

Julie joined the Center in January 2016. She is a certified Gerontological Clinical Nurse Specialist. Prior to teaching, she held roles in long term care and health system leadership. She has served on the Wisconsin Board of Nursing. She has taught courses on cultural diversity in health care, nursing leadership, and gerontological nursing and end-of-life care. Her area of research focuses on health improvement in African American older adults in central city churches.

HELEN MEIER, PH.D., MPH
Joseph J. Zilber School of Public Health
Assistant Professor

Helen joined the Center in December 2016. Her research seeks to understand the role immune function in mid- and older-age plays on later life health trajectories and how social and environmental exposures over the life course may influence these relationships. Dr. Meier has investigated life course models by which socioeconomic position is associated with later life immune function, as well as the role of nativity and acculturation as independent predictors and modifiers of the life course social patterning of immune response to persistent infections. Current work examines autoantibodies, a marker of immune dysfunction, in a healthy aging cohort in relation to environmental exposures and immune aging.

XIAO QIN, PH.D., PE
College of Engineering & Applied Sciences
Associate Professor

Xiao became affiliated in October 2016. His primary research concentrations are Highway Safety and Traffic Operations, Intelligent Transportation Systems (ITS), Sustainable Transportation Planning, Statistical Modeling and Applications in Transportation, and GIS and Spatial Data Analysis. He is particularly interested in finding technical and engineering solutions to improve traffic safety and mobility for seniors, persons with physical disabilities and vulnerable road users including pedestrians and bicyclists.

RENEE WALKER, DRPH, MPH
Joseph J. Zilber School of Public Health
Associate Professor

Renee affiliated with the Center October 2014. Her current research explores disparities in obesity, cardiovascular disease, and diabetes self-management among older adults, with a focus on neighborhood context, including deprivation, poverty, and racial/ethnic and income inequalities. She has developed culturally appropriate exercise interventions for African American and Latinas at risk for coronary heart disease and/or diabetes. At a comprehensive health center, she helped assess diabetes self-management among low-income, older adult patients. Her research has identified individual, familial, community and policy-level factors that influence health and wellness among older adults.

ERIN RUPPEL, PH.D.
College of Letters & Science
Assistant Professor

Erin became affiliated June 2015. Erin’s research centers around the intersections of health, interpersonal communication, and communication technologies. Specific interests include relationship maintenance via communication technologies; health information seeking; communication technologies and communicative difficulties in older adults; and the use of communication technologies for social compensation and enhancement. Erin is currently investigating the process of how older adults integrate communication technologies into their day-to-day communication.

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Joseph J. Zilber School of Public Health
Assistant Professor

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Education Updates

TWO NEW UNDERGRAD COURSES ADDED
Two of the courses submitted by CATR in 2016 were approved! We will now offer two new courses: Spirituality & Aging, and Communicating with Older Adults. Both courses will meet requirements for the Undergraduate Certificate in Healthy Aging, and are offered only in the fall semesters.

// COMMUNICATING WITH OLDER ADULTS
Communications 285
Online course

// SPIRITUALITY & AGING
Religious Studies 250
Tues & Thurs, 11:00-12:15

CATR PRESENTS AT TWO NATIONAL CONFERENCES
Rachelle Alioto, CATR’s Director of Education and Programming, presented at two national conferences this spring alongside our partners from Saint John’s On The Lake. They shared insights from developing our popular course, Aged to Perfection: An Introduction to Aging, which provides students with first-hand accounts of the challenges and opportunities of older age through an intergenerational learning environment centered around dialogue.

// FORTY-THIRD ANNUAL MEETING & EDUCATIONAL LEADERSHIP CONFERENCE
Association for Gerontology in Higher Education
Miami, Florida; March 2017

// AGING IN AMERICA CONFERENCE
American Society on Aging
Chicago, Illinois; March 2017

CATR COURSE GIVEN PROMISING PRACTICES AWARD
Our popular course, Aged to Perfection: An Introduction to Aging, which was co-created with Saint John’s On The Lake, was given the Promising Practices Award in March 2017 by the Mather Lifeways Institute on Aging. This award highlights organizations working with older adults in a variety of settings that are moving away from conventional practices by developing and implementing innovative approaches.

From the Mather Lifeways press release:

Saint John’s Communities was chosen as a winner based on collaboration of residents and staff at Saint John’s On The Lake with the University of Wisconsin–Milwaukee on a college course on aging. This unique collaboration drew on the skills and experience of residents, who helped create the course curriculum and led the classes; playing an active role in contributing, rather than serving as subjects of study or passive learners. Called Aged to Perfection: An Introduction to Aging, the class of eight students and nine residents met weekly. The curriculum focused on what it means to be an older adult today, what influences the way we age, and why we should care. Residents served as presenters, small group facilitators, and storytellers who shared experiences about life changes, and changes they’ve experienced in cognition and physical health. The goal was to use people’s stories to connect students to the emotional and intellectual aspects of aging that they might not be aware of, and to confront stereotypes of aging.
CERTIFICATE PROGRAMS CONTINUE TO GROW

// BREAKDOWN OF CERTIFICATE DECLARATION BY SCHOOL/COLLEGE

- Undergraduate Student
- Graduate Student

// UNDERGRADUATE CERTIFICATE IN HEALTHY AGING
Established in the fall of 2015 and open to all undergraduate students, the certificate is an interdisciplinary program developed in response to the increase in the senior population and the need for a workforce knowledgeable in the challenges and opportunities in this demographic shift. It focuses on understanding the processes of aging, issues related to aging, and the challenges of older adulthood.

// GRADUATE CERTIFICATE IN APPLIED GERONTOLOGY
The certificate is an advanced multidisciplinary program designed to prepare professionals to work in the field of aging in a variety of settings, depending on the student’s professional discipline and career goals. It integrates gerontology into the student’s primary discipline, or it may be completed as a stand-alone program.

// ENROLLMENT TRENDS IN GRADUATE CERTIFICATE PROGRAM

Students admitted

Students graduated

CATR SHINES AT HBSSW AWARDS CEREMONY

Every May, the Helen Bader School of Social Welfare holds its Annual Awards Ceremony to recognize excellence during the previous year. This year, CATR Scientist Melinda Kavanaugh was awarded the Helen Bader School of Social Welfare Excellence in Research Award for her work with young caregivers, and CATR Program Associate Lydia LaGue was awarded the Random Act of Kindness Award.

SCHOLARSHIP RECIPIENTS ANNOUNCED

Also at the HBSSW 2017 Awards Ceremony, three students from CATR’s Graduate Certificate in Applied Gerontology were awarded the Helen Bader Age & Community Scholarship. The winners are (left to right) Brittany Heintz, pursuing a PhD in Kinesiology; Austin Holik, pursuing a Master’s in Social Work; and Jeffrey Peterson, who’s also pursuing a PhD in Kinesiology. Additionally, Holik was awarded the Irene Frye Scholarship for Gerontology.
MINI-DOCUMENTARY CELEBRATES CATR COURSE

CATR Director of Education and Programming, Rachelle Alioto, worked with a team of staff and residents at Saint John’s On The Lake to make improvements to Aged to Perfection, a course offered for the first time in Fall 2015 where students work directly with residents at Saint John’s and learn first-hand from them through facilitated discussions. This mini-documentary was released to promote the course, generate enrollment, and encourage duplication of the concept. To watch the 10-minute mini-documentary, search for us on YouTube.

PROFESSIONAL DEVELOPMENT EXPANDS

Our Professional Development program, launched in spring 2015, promotes lifelong learning by offering high quality, innovative, accessible training and education on topics related to aging and older adults. The program is supported by community partners who offer their venue and support for programming.

The attendees range from professionals interested in increasing their knowledge and skills in gerontology to caregivers and those wanting to learn more about their own aging. The workshops cover a variety of topics and fulfill Continuing Education Hours for eligible participants.

// BY THE NUMBERS

227
TOTAL ATTENDEES FOR THE 2016-2017 SEASON

6
NEW INSTRUCTORS JOINED THE TEAM

5
OF 11 OFFERINGS ADDRESSED ALZHEIMER'S & DEMENTIA

152
TOTAL CONTINUING EDUCATION HOURS (CEHs) CREDITED IN 2016-2017

Our Professional Development series would not be possible without the support of our community partners: Saint John’s On The Lake, Milwaukee Catholic Home, and the Jewish Home and Care Center. This year, we are excited to announce a new community partner: Brookfield Rehabilitation & Specialty Care. Adding this location allows us to reach audiences farther west in Milwaukee than ever before.
CATR DIRECTOR AWARDED $2.82M GRANT

CATR Director Dr. Scott Strath received R01 funding from the National Institutes of Health totaling $2.82 million! The award started April 1, 2017 and will go through March 31, 2022. The project, “Calibrating freeliving physical activity characteristics across functionally-limited populations using machine learned accelerometer approaches,” will employ whole room calorimetry, doubly labeled water, and freelliving video-feed direct observation to develop and train machine learning wearable technology algorithms to assess physical activity energy expenditure, domain, type, and location in 380 individuals with and without physical function limitations.

CATR SCIENTIST SELECTED FOR RACAS AWARD

Center Scientist Dr. Kevin Keenan was selected for a Research and Creative Activities Support (RACAS) Award for his proposal “Neural Mechanisms Contributing to Falls in Older Adults.” Thirty proposals were received by the internal granting organization and Keenan’s was one of only fourteen to be selected. The award is for over $15,000, from July 1, 2017 to December 31, 2018.

CATR SCIENTIST NAMED GSA FELLOW

The Gerontological Society of America (GSA), the largest interdisciplinary aging-focused academic organization in the United States, has named CATR Scientist Dr. Jung Kwak a Gerontological Society of America Fellow in the Social Research, Policy, and Practice Section.

The status of fellow — the highest class of membership within the Society — is an acknowledgment of outstanding and continuing work in gerontology.

CATR SCIENTIST RECEIVES TWO AWARDS

Dr. Rhonda J. V. Montgomery, CATR Scientist and Professor Emerita, was awarded the Gloria Cavanaugh Award for Excellence in Training and Education, which recognizes an individual who has made a significant contribution to training and education in the field of aging, and the University of Wisconsin-Milwaukee Ernest Spaights Plaza Award, the most prestigious award at UWM, recognizes individuals who made a significant, enduring, and institution-wide contribution to the growth, development and mission of the university.

Montgomery developed the evidence-based Tailored Caregiver Assessment and Referral (TCARE®) Program. Randomized, longitudinal studies show that TCARE reduces caregiver stress and clinical depression, delays or prevents out-of-home placement of care recipients and increases positive feelings associated with caregiving. The TCARE® program and training curriculum was developed and tested over time with a diverse national cohort of practitioners, managers, caregivers, care receivers, and policy makers. The curriculum was designed to include information and practice skills that would enable people outside of the social sciences field to be trained and successfully adapt and administer the program. TCARE® has been adapted for use with military families and has been translated into Spanish, Chinese, Korean and Russian.
The Health Research Symposium on May 5, 2017 was hosted by the College of Health Sciences, the College of Nursing, and the Joseph J. Zilber School of Public Health. Graduate and undergraduate students introduced their research projects and showcase their work in a public setting before their peers, professors, and the community. Seven students, who have been conducting research under CATR Scientists, presented their findings.

**SEVEN CATR STUDENTS PRESENT POSTERS AT 2017 HEALTH RESEARCH SYMPOSIUM**

<table>
<thead>
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<th>Name</th>
<th>Title</th>
<th>Department</th>
<th>Faculty Sponsor</th>
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<td>Jenna Blujus</td>
<td>Using Eye Movements to Dissociate Memory Performance in Normal and Pathological Aging</td>
<td>Psychology</td>
<td>Ira Driscoll</td>
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<td>Christine Kaiver</td>
<td>Associations between Genetic Risk for Alzheimer’s Disease and Hippocampus-Dependent Memory and Learning in Healthy, Middle-Aged Adults</td>
<td>Psychology</td>
<td>Ira Driscoll</td>
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<td>Enrique Gracian</td>
<td>KIBRA Polymorphism and Brain Integrity in Middle Age</td>
<td>Psychology</td>
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<td>Deborah Hannula</td>
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<td>Ira Driscoll</td>
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<td>Kinesiology</td>
<td>Scott Strath</td>
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<tr>
<td>Marijam Frahmand</td>
<td>Complement Receptor type 1 Polymorphisms Associated with Reduced Cortical Volume and Thickness in Healthy Middle-Aged Adults</td>
<td>Psychology</td>
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<tr>
<td>Nicholas Lerma</td>
<td>Survey on Screening for Lead Poisoning in Children’s Hospital of Wisconsin Primary Care Clinics</td>
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</tr>
<tr>
<td>Rachel Lecher</td>
<td>Associations between Genetic Risk for Alzheimer’s Disease and Hippocampus-Dependent Memory and Learning in Healthy, Middle-Aged Adults</td>
<td>Psychology</td>
<td>Ira Driscoll</td>
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<td>Taylor Rowley</td>
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<td>Ira Driscoll</td>
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<td>Hannah Scherkenbach</td>
<td>Predicting Maximal Oxygen Uptake in Adults Using a Walk Test</td>
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<td>Scott Strath</td>
</tr>
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The Young Caregivers

Very little is known about the million-plus American children providing significant medical care for adults. Melinda Kavanaugh wants to change that.

BY DAVID LEWELLEN

After Brennon Colburn’s father was diagnosed with amyotrophic lateral sclerosis – commonly known as ALS, or Lou Gehrig’s disease – his dad’s health rapidly declined. So Brennon, then 13, biked several times a week through the streets of Oshkosh from the home he shared with his mother to his father’s house. There, he did laundry, carried his father upstairs, and even helped him bathe and use the toilet.

“He used to do that for me,” Brennon says. “I felt sad, but I felt like I owed it to him.” He’d repay the debt for “He used to do that for me,” Brennon says. “I felt sad, but I felt like I owed it to him.” He’d repay the debt for

An estimated 1.4 million children in the United States could be classified as young caregivers, the total reported by a 2005 study. That study, a collaboration between the National Alliance for Caregiving and the United Hospital Fund, was the first attempt to discern the prevalence of young caregivers, and it remains the only one.

Kavanaugh, an assistant professor of social work, thinks that estimate is low, considering all the factors involved. “You think of how many people have a disease,” Kavanaugh says, “and it’s hard to get care anyway, and we know that most care is provided by family members.

“So, of course, kids are going to get involved,” she continues. “But how they are involved, and the impact of their involvement, is what we study.”

Most of Kavanaugh’s research involves interviewing children ages 8 to 19, but some as young as 6 have expressed an interest in talking about their experiences. The tasks they handle vary depending on age, but Kavanaugh shares how even some 8-year-olds have helped parents get dressed, bathe, use a feeding tube or administer medication.

“We do know that these kids grow up fast,” she says. “One thing I hear a lot is, ‘I lost my childhood.’ It manifests in something as simple as being unable to play after school because an ill parent is waiting.

Kavanaugh has learned that children hardly ever get training in how to give care, even (or especially) for medical procedures. For many, the best-case scenario is that they watch an adult do it once. They are often afraid of a mistake that will make things worse.

So Kavanaugh goes beyond using her research to inform practice and toward making a difference in the lives of her subjects. “I really connected with her,” Brennon says. “She told me that this is what’s going to happen, and I’ve got to face the facts. She told me that he was still the same person, even if he couldn’t talk or eat. She wasn’t acting like a social worker to me. It was more like she was a mentor.”

And Kavanaugh never wants to overlook that part of her job. She spent the first part of her career as a social worker in health care settings and pursued her doctorate at the University of Wisconsin-Madison so she could research young caregivers. “Sometimes, being in research is therapeutic in and of itself,” she says. “You’re letting them tell the story, and you are bearing witness.”

She’s found parents are proud of their children for their care contributions, but also feel guilty about needing those contributions. A key question, without a definitive answer yet, is how many parents rely on a child because they can’t afford anyone else.

The few federal and state programs that aid family caregivers are often underfunded and don’t acknowledge caregivers under 18. In the United Kingdom and Australia, family members, including children, are eligible for financial support and respite care. “Light-years ahead of anything we have here,” Kavanaugh says.

Because the issue of young caregivers is so far beneath the radar, Kavanaugh’s duties often include a public education component. When speaking about it with policymakers, she concentrates on economics and how children’s home responsibilities keep them from being engaged at school, so they’re less prepared for the workforce.

Federal research tracks children’s health, but the physical, mental and emotional impact on a child caring for a family member falls through the cracks.

“I value research with a translatable component,” Kavanaugh says. “How can it really, truly go back to the community?”

To listen to the interview, go to www.wpr.org.

CATR Scientist Melinda Kavanaugh, and Connie Siskowski, the President and Founder of the American Association of Caregiving Youth (AACY) were interviewed by Wisconsin Public Radio in July 2016 about their work with young caregivers.

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BY DAVID LEWELLEN
“Emotionally, it was my normal,” says 16-year-old Ian Turley of Menomonee Falls, who spent some four years in a caregiving role before his father died of ALS in 2014. “I didn’t know what having an able dad was. You think that any person could be responsible for someone in that situation.”

The situation can be made better, however, particularly if children are acknowledged and valued.

“They need support,” Kavanaugh says, “and friends who understand it, and people to help them provide care.”

Among the support outlets for young caregivers are summer camps, which are often sponsored by disease-centric organizations. In 2016, Kavanaugh asked Ian to speak to an audience of younger children living with an ALS patient, which helped speaker and listeners alike.

Stan Stojkovic, dean of the Helen Bader School, says that as the U.S. population ages, caregiving in general will become a more important area of social work. He says Kavanaugh is ahead of the curve on the other end of the age spectrum and that helps UWM in more ways than just funding and exposure. “The real benefit,” Stojkovic says, “is her connection to the community. It’s good for the campus and the students and faculty.”

As an example, in one of Kavanaugh’s current projects, she’s working with Milwaukee’s United Community Center on school-based interventions for Latino youth caregivers. “I value research with a translatable component,” she says. “How can it really, truly go back to the community?”

And while continuing to move her research forward with every child she interviews, she remains connected to her past.

“I can still close my eyes,” Kavanaugh says, “and be that social worker doing a home visit, seeing the youth as a caregiver.”

This story was originally written for and published in the UWM Report. To see the original, visit uwm.edu/news.

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**Sundowning**

UWM researcher studying nighttime agitation in Alzheimer’s patients.

**BY LAURA OTTO**

People with Alzheimer’s often experience a period of restlessness or agitation late in the day. Known as “sundowning,” it also disrupts the patients’ sleep.

Researchers at the University of Texas at Austin and the University of Wisconsin-Milwaukee believe a condition called restless legs syndrome (RLS), an inability to sit or lie still in the evening and night, plays a major role in sundowning behavior.

Nursing professors Kathy Richards at UT Austin and Christine Kovach, the Jewish Home and Care Center Research Professor in Aging at UWM, have a $3.9 million, five-year grant from the National Institute on Aging to test the theory.

Nighttime agitation behaviors are often treated with powerful antipsychotic drugs that have dangerous side effects. Richards and Kovach want to know if treatment with RLS drugs alone might effectively reduce symptoms and decrease the use of antipsychotic drugs.

“Nighttime agitation is the No. 1 reason why people with Alzheimer’s cannot be cared for at home,” Richards said. “If we can find a better and more precise way to treat it, we can improve the quality of life for many persons who are living with Alzheimer’s disease.”

The study, an eight-week, randomized controlled trial, involves 136 care residents with nighttime agitation and RLS living in long-term care settings in Texas. The patients will receive either an FDA-approved drug for RLS or a placebo.

“We have brought together the world leaders on RLS and dementia on the study team and believe results from this precision medicine approach could be a game changer,” said Kovach.

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1. According to the National Alliance for Caregiving
2. According to Melinda Kavanaugh
3. According to the Bill and Melinda Gates Foundation

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**The Young Caregivers continued**

1.4 million children serve as caregivers

60% say it affects their school attendance and performance

22% of high school dropouts cite caregiving as their reason for leaving school

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CATR Scientist Christine Kovach. Photo by Troye Fox.
Road Scholars

How Xiao Qin and Troy Liu are engineering better traffic safety.

BY MITCH TEICH

In 2015, the Wisconsin Legislature increased the speed limit from 65 to 70 mph on hundreds of miles of interstate highways. That same year, statewide fatalities attributed to vehicle crashes jumped to 566, up from 506 in 2014, the first significant increase in decades. At first glance, it seems like a simple case of cause and effect.

But much like driving in bad weather, the answer is not so fast. Funded by state and federal grants, Yue "Troy" Liu and Xiao (pronounced "Shaw") Qin are researching ways to better understand and manage traffic. The College of Engineering and Applied Science associate professors pore over data pulled from roadside sensors, mobile phones and simple police crash reports, all with the goal of making driving safer, be it in a construction zone or on the open road.

"Crashes can be caused by a variety of reasons," explains Qin, who's studying the issue for the Wisconsin Department of Transportation. He thinks a main reason for the 2015 increase in traffic fatalities is the number in 2014 was so low.

In fact, he says, the number of fatalities had fallen so far since the end of World War II that an increase might well have been expected. "Basically," he says, "when you hit rock bottom, there’s nowhere to go but up."

He believes the decline in those years can be attributed to technology, in a variety of ways.

"We have better vehicle technology – smarter cars with better safety equipment that’s more affordable," Qin says. The roads themselves are safer, too, and there is greater enforcement of traffic laws. He also notes that first responders and other emergency medical staff are more skilled than ever, meaning some serious injuries are less likely to become fatalities.

As of now, there remains no clear verdict on how higher speed limits affected traffic fatalities. "It’s controversial," Qin says. "Speeding has been a problem for a long time. And speed plays a significant role in injury severity. But there’s no clear evidence that raising the speed limit will lead to more crashes."

His work is aided by collecting better crash-related data, which allows for better models to determine statistically significant crash factors. Law enforcement authorities are revising the MV4000 form used to document crash sites. "And now," Qin says, "we’re expanding our analysis to include more human factors – driver behavior, law enforcement effort and even socioeconomic status of the drivers."

The socioeconomic data helps determine if there’s an association with better safety, even if it’s not a direct correlation. "The families with a higher income can afford new cars, better cars, safer cars," Qin says. "And their communities may be able to build better roadways with better pavement conditions."

"When you hit rock bottom, there’s nowhere to go but up."

Liu’s work, focused on improving traffic safety and efficiency related to road construction zones, is also bolstered by advances in data collection.

He’s been awarded a federally funded $1.56 million grant to help create the next generation of work zone management. Governments develop transportation management plans to guide drivers through construction zones, and currently, they do so the way it’s always been done – manually. "That means people base it on their theories," Liu says. "But we have a lot more useful data, and we can take advantage of the data that’s available."

In Wisconsin, Liu explains, the state collects data about traffic conditions from thousands of sensors and cameras along highways. "It’s easy for them to streamline the data into their server. And then we have access to this data, so we can do our research to improve traffic management."

"We have better technology – smarter cars with better safety equipment that’s more affordable," he says. "But we have a lot more useful data, and we can take advantage of the data that’s available."

"We also carry advanced sensors in our cars, even if we don’t realize it. A lot of us are using smartphones," Liu says, "and sometimes, their location data – their trajectories – will be recorded. So, we can understand their behavior, their travel patterns and the travel time they spend on the roads."

All of this helps inform better design for highways and better traffic management, and there’s a lot at stake from using that data. Large cities like Washington, D.C., can have 700 to 800 construction zones per year.

"It’s pretty important to have a very good system to try to schedule those projects so that we can minimize their impact on the overall [traffic] network," Liu says. He’s helped the D.C. Department of Transportation implement such a system, and it could be adapted to other congested places, like Chicago – or Milwaukee.

A comforting thought the next time you see a “Detour Ahead” sign.

This story was originally written for and published in the UWM Report. To see the original, visit uwm.edu/news.
PUBLICATIONS JULY 2016 - JUNE 2017


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