“Of molecules, mice, and men.”

This trinity aptly summarizes the spectrum of discovery, testing, and life-changing applications that are the promised hallmark of the new Aging Institute of UPMC Senior Services and the University of Pittsburgh. Long recognized nationally as a pioneering force of excellence in geriatric care, the Aging Institute is now investigating the very fundamentals of aging under the leadership of its new director, Toren Finkel, MD, PhD, supported by a multi-million-dollar investment by UPMC and the University of Pittsburgh in new faculty and state-of-the-art research laboratories.

In its new role, the Aging Institute will add a focus on the basic science of aging to its work, enabling it to address the entirety of the aging research spectrum. And by illuminating the root cause of the many diseases associated with aging — from cardiovascular disease, cancer, and neurodegenerative disorders — the Institute will begin addressing these diseases in their biological context.
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Dear Colleagues and Friends,

It’s a rare day that I’m not reminded of what a privilege it is to work as a researcher in the field of aging. If you love science as I do, you know it is a process both creative and profound. Even when we find ourselves most challenged, there is still something intrinsically noble in the scientific search for understanding and discovery.

I’ve come to feel that way even more as recent advancements in the biology of aging allow us and others in the field to大胆地 think about ways we can transform the aging process in humans. We are on the cusp of a tremendous paradigm shift: By understanding how we age and translating it to new therapies, we have the potential to slow down the aging process and thereby prevent, or even stop, a host of age-related complications and diseases.

But given the explosive new growth occurring in the study of aging, the chance to build a research laboratory from the ground up in Pittsburgh — one dedicated to transforming the aging process in humans — proved irresistible. It signals that the University of Pittsburgh and UPMC are committed to building a research laboratory from the ground up in Pittsburgh — one dedicated to the new biology of aging research dimension to its mission.

In September of 2017, these advancements led me to become part of the remarkable work of the Aging Institute of UPMC Senior Services and the University of Pittsburgh. For many years, I served as a researcher at the National Institutes of Health (NIH) in Bethesda, Maryland. It was a wonderful, fascinating, and challenging place to work, and I’m grateful for the many rewarding experiences I had there.

But given the explosive new growth occurring in the study of aging, the challenge to create a research laboratory from the ground up in Pittsburgh — one dedicated to solving the chronic diseases of aging as part of the visionary new UPMC Immune Transplant and Therapy Center — proved irresistible. It signals that aging as a field has sufficiently matured to the point that we can now seize the opportunity to address human aging in a new way.

Much has happened during my first year here as we seek to continue and build upon the many strengths of the Aging Institute — from its rich and varied education, community outreach, and practice initiatives focused on creating new models of care for older adults, to its vital role as a convening mechanism for collaboration among the schools of health sciences at the University of Pittsburgh — adding a new biology of aging research dimension to its mission.

The charge for the Aging Institute will focus on the identification of biochemical pathways and therapies that target the process of aging, with the ultimate goal of extending health span and eliminating diseases. A major focus of the new Aging Institute will be the development of new drugs that will enhance our fundamental resilience to age and prevent age-related complications such as atherosclerosis, lung fibrosis, and neurodegenerative diseases.

Highlights of the Aging Institute Laboratory’s new research agenda in 2018 include:

- Construction and opening of the new Aging Institute Laboratory at Bridgeside Point, featuring state-of-the-art laboratories dedicated to biological discovery in aging
- Recruitment of 10 gifted faculty investigators from within the University of Pittsburgh and leading institutions across the nation
- Securing more than $4 million in initial research funding from NIH and private support, catalyzed by leadership funding from The Beckwith Institute
- Initiation of a new drug discovery program

And I am deeply honored that Anne Newman, MPH, has agreed to serve as the Institute’s new clinical director to assure the continued growth of its many legacy programs that promote cross-disciplinary collaboration at the University of Pittsburgh and UPMC. She also will be involved in the development and testing of new therapies, joined by Daniel Forman, MD, the new director of emerging therapeutics for the Institute. With their combined leadership and experience, we are well positioned to soon design and launch our own novel mechanistic trials.

We are grateful every day for these new opportunities, made possible through a combination of initial research funding from NIH and private support, catalyzed by leadership funding from The Beckwith Institute.

In summary, may I say that those of us at the Aging Institute, in all our many capacities, recognize that working together we have the power to transform the lives of older adults and our greater society at large. The year of 2018 has been ambitious, successful, and satisfying — an exciting portent of the life-changing discoveries we hope to realize through our efforts.

Sincerely,

Toren Finkel, MD, PhD
Director, Aging Institute of UPMC Senior Services and the University of Pittsburgh
UPMC.com/Aging
Anne B. Newman, MD, MPH
Clinical Director, Aging Institute of UPMC Senior Services and the University of Pittsburgh
Katherine M. Detre Endowed Chair, Population Health Sciences
Director, Center for Aging and Population Health
Professor, Epidemiology, Medicine, and Clinical and Translational Science Institute

Dr. Newman, a leading voice with the Aging Institute since its inception more than a decade ago, now serves as its first clinical director. “With her exceptional knowledge and expertise in understanding what happens biologically as we age and how to maintain function and good health into old age, she is unquestionably the perfect person to lead the Aging Institute’s clinical efforts and interventions,” says Dr. Finkel in announcing her appointment.

A renowned researcher in the field of epidemiology and public health, Dr. Newman served for many years as a distinguished gerontologist and was the first geriatrics fellow at the University of Pittsburgh School of Medicine. During her clinical career, she was staff physician at the highly regarded UPMC Senior Care-Benedum Geriatrics Center, which offers primary ambulatory care services for older persons with complex problems. She also established the region’s first teaching nursing home, Canterbury Place (now part of UPMC Senior Communities), as well as Longwood at Oakmont, a model continuing care community.

“My own journey as a researcher has focused on understanding the reasons that cause loss of mobility in order to prevent disability and optimize health in old age,” notes Dr. Newman, who has led several seminal research studies, including two long-term projects on cardiovascular health and healthy aging body composition. She has followed thousands of participants from the Pittsburgh area for two to three decades to understand the health outcomes of older adults. She also has conducted clinical trials testing lifestyle and medications to improve health span. Most recently, she identified that the predictors of healthy aging include genetic and metabolomic signatures.

“I’m very excited to be part of the next phase of the Aging Institute’s evolution,” she says. “We are looking forward to continuing its initiatives in education and training to foster best practice care, as well as its efforts promoting collegial, multidisciplinary collaboration throughout UPMC and the University of Pittsburgh, such as Research Day. The Institute promises to be a continuing catalyzed and community for academicians and researchers who truly care about older adults.”

With the Institute’s new focus on the biology of aging, she also sees new opportunities to optimize health span. “We expect to increasingly look at approaches from a prevention orientation and consider the underlying drivers of conditions that require significant integrated health services,” she notes. “For example, cardiovascular prevention is critical to optimizing health span. There is a tremendous capacity in older people to recover, respond, and improve their health, even after serious illness.”

She also feels it is important for the Institute to support efforts to ensure that the University’s centers of excellence that support aging remain vibrant and well-funded. “They strengthen our work as a whole,” she notes. “My hope is that working together, we’ll make Pittsburgh the best place to grow old.”

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Since its inception, the Aging Institute has led collaborative initiatives through a variety of multidisciplinary teams targeting key health problems and wellness initiatives important to older adults. Drawing on the talents and insights of dedicated researchers, scientists, and administrators from the University of Pittsburgh and UPMC, these innovative collaborations have generated new knowledge and actionable solutions — and served as incubators for large-scale, externally funded research such as RAVEN. This year, the Healthy Brain Aging Initiative continued to explore new ways of delaying the effects of brain aging.
Healthy Brain Aging Initiative

Is brain aging an inevitability we all must one day face? Are there active steps we can take to protect our brains from — or at least delay — the intrinsically effects of aging?

These questions have shaped the agenda of the Aging Institute’s multidisciplinary Healthy Brain Aging Initiative. Since 2013, its members have focused their efforts on assessing the impact of physical activity on the brain in hopes of developing presentation strategies linked to changes in lifestyle.

Over the past five years, they have conducted both animal and human studies, including:

- Measurements of physical and cardiovascular fitness
- Functional magnetic imaging to look at blood flow in the brain
- Proteomic: analysis of the blood proteins and gene expression profiling of blood cells
- Neuropsychological and cognitive testing

In June 2018, the first paper to come out of the group’s research — “Association of Hippocampal Substructure Resting-State Functional Connectivity With Memory Performance in Older Adults” — was published in the American Journal of Geriatric Psychiatry. Its findings were based on the group’s research — “Association of Hippocampal Substructure Resting-State Functional Connectivity With Memory Performance in Older Adults” — published in the American Journal of Geriatric Psychiatry.

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A Study in Continuance: The Test Group vs. the Control Group

“When we began the Initiative, we knew from earlier studies with primates that just being active improves brain health, so our clinical study with humans was based on that basic science work,” says chair Judy L. Cambron, PhD, professor of psychiatry and director of the Pitt Science Outreach program at the University of Pittsburgh.

In 2015–16, the Initiative completed a human study conducted in 2015–16.

- Test group participants were asked to build up to 10-minute periods of moderate exercise, three times a day, five days a week.
- Control group members were asked to simply stretch three times a day.
- Both groups were given electronic tablets to track their activities through regular group sessions.

Both groups engaged in socialization activities through regular group sessions.

Unexpected Findings in Cognitive Function

While previous research studies led the Initiative to expect likely improvements in the exercise test group, cognitive function analysis results also revealed unexpected changes in the stretching control group.

“We were surprised to see improvements among the members of the stretching control group, who appeared to get better at learning, and memory,” says Meryl A. Butters, PhD, associate professor of psychiatry and director of the Pitt Science Outreach program at the University of Pittsburgh, who led the clinical study of the members of the stretching control group. “When we began the Initiative, we knew from earlier studies with primates that just being active improves brain health, so our clinical study with humans was based on the basic science work,” says chair Judy L. Cambron, PhD, professor of psychiatry and director of the Pitt Science Outreach program at the University of Pittsburgh.

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The Bridgeside Point research building is just a stone’s throw from where steel mills once lit the night sky and fueled the lifeblood of Pittsburgh’s manufacturing economy. Today, this area is part of the region’s booming “eds and meds” economy and the home of the new Aging Institute Laboratory. Here, talented investigators are using sophisticated molecular techniques to answer the fundamental biological question of what controls how, and why, we age.

The answers they yield through their research, says Toren Finkel, MD, PhD, the Aging Institute’s new director, have the potential to unlock powerful new approaches to extend our health span — the period of life during which a person remains free from serious illness — by increasing the number of years we remain free of chronic, age-related diseases and conditions.
A Revolutionary New Look at Aging

To many, it seemed an impossible undertaking, but under the leadership of Dr. Toren Finkel, the gleaming new state-of-the-art Aging Institute Laboratory was successfully designed, constructed, equipped, and staffed in just over a year’s time. It comprises nearly 30,000 square feet of lab and office space on two floors of Bridgeside Point 1, an impressive and modern glass-encased building that is part of several University of Pittsburgh research operations.

Prior to coming to the Aging Institute, Dr. Finkel spent a quarter century working with the National Institutes of Health (NIH) in Maryland. “Over the last years, researchers have made a great deal of progress trying to understand the basic mechanisms of why we age, and uncovered some of the core regulators of the aging process,” says Dr. Finkel. “We’ve come to understand that aging is like every other biological process: it’s regulated by biochemical and genetic controls. While there’s a stochastic nature to it, there’s also a lot of regulation in many places, where we can intervene rationally to change the trajectory. That’s very exciting because the aging process is fundamental to so many diseases.”

“The bold idea that the Aging Institute will test is whether or not those pathways can be treated with drugs: Can we find medicines that target those pathways, just like we have medicines that target other pathways in our body? By essentially slowing or reversing the rate at which we age, we could potentially prevent a variety of age-related diseases. The idea isn’t really to make people live incredibly longer lives, but much healthier lives. Ultimately, the potential impact on human health and quality of life could be staggering.”

The Aging Institute plans a three-pronged approach to its research:

• It will continue to explore the basic biology of aging, using sophisticated molecular techniques.
• It will work to identify novel small molecules — drugs — to combat the aging process.
• It will conduct clinical trials to leverage its discoveries in the biology of aging to test new therapies in actual human patients.

Accelerating New Treatments

Dr. Finkel’s own research has significantly contributed to the understanding of the aging process. He has studied a specific class of enzymes (sirtuins) that are key regulators in aging and discovered that cellular energy pathways are involved in the maintenance of the body’s stem cells.

Over the years, his research has involved both animal models and humans, bridging basic science and clinical medicine. His current work at the Aging Institute now explores the relationship between mitochondrial metabolism and human aging. “We are heavily invested in the joy of discovery here and have made considerable progress in the course of our first year,” says Dr. Finkel. “While we continue our work in basic biology, we are increasingly thinking of more practical applications. There are already a number of novel drugs that are in different parts of our pipeline, and we’re increasingly optimistic that we can move some of these forward into clinical trials within the next several years.”

“In 2019, we’re planning to test whether repurposing biological therapies already-approved by the Food and Drug Administration (FDA) that target the inflammatory cytokine IL-6 can reduce the symptoms of frailty,” says Dr. Finkel. “If we’re successful, this will be the first trial to rigorously test the ‘inflamm-aging’ hypothesis of human aging, which theorizes that aging is directly chronic, low-grade inflammation.

Immune Transplant and Therapy Center

The Aging Institute’s cutting-edge aging research to help patients have longer, healthier lives is a central part of the Immune Transplant and Therapy Center (ITTC), a major $200-million initiative of UPMC and the University of Pittsburgh. Its focus is to promote scientific discoveries that will harness the power of the human immune system to treat and cure a wide range of diseases. Focused on the areas of cancer, transplantation, and aging, its ultimate goal is to accelerate the development and distribution of life-saving and cost-effective clinical solutions to patients.

Pittsburgh’s Bridgeside Point 1 research building
Aging Institute Laboratory Inaugural Faculty

During 2018, ten principal investigators were recruited to conduct research at the Aging Institute Laboratory. They came from leading institutions from throughout the United States, as well as from the University of Pittsburgh, and included both established researchers and gifted early-career faculty.

Boedi “Bill” Chen, PhD (University of Pittsburgh) Assistant Professor of Medicine, Division of Pulmonary, Allergy and Critical Care Medicine

Research Interests: Studying the molecular mechanisms that control inflammation and cell proliferation via protein ubiquitination (ubiquitin biology)

Yvonne Daste, PhD (Genentech) Assistant Professor of Medicine, Division of Cardiology

Research Interests: Delineating the molecular and cellular mechanisms that underlie the pathogenesis of pulmonary fibrosis (a fatal and progressive lung disease)

Aditi Gurkar, PhD (Scripps) Assistant Professor of Medicine, Division of Geriatric Medicine

Research Interests: The role of DHA damage in aging and age-related pathologies

Geng Li, PhD (Harvard) Assistant Professor of Medicine, Division of Cardiology Research Interests: Functional genomics of age-related diseases and the use of human genetics as a guide for new drug targets

As part of its research mission, the Aging Institute also is helping to train a new generation of novel holistic approaches to prevent and treat age-related disease.

Bokai Zhu, PhD (Baylor) Assistant Professor of Medicine

Research Interests: Stress-sensing mechanisms and mitochondrial import machineries of mitochondria proteins, particularly the stress-induced regulation of mitochondrial biogenesis

Yusuke Sekine, PhD (National Institutes of Health) Assistant Professor of Medicine

Research Interests: Stress-sensing mechanisms in degenerative diseases

Shiori Sekine, PhD (National Institutes of Health) Assistant Professor of Medicine

Research Interests: The role of lysosomal biogenesis in degenerative diseases

Ana Mora, MD (University of Pittsburgh) Assistant Professor of Medicine, Division of Pulmonary, Allergy and Critical Care Medicine

Research Interests: Cellular responses to oxidative, endoplasmic, and mitochondrial stress

Yuan Liu, PhD (University of Pittsburgh) Assistant Professor of Medicine, Division of Pulmonary, Allergy and Critical Care Medicine

Research Interests: The molecular mechanisms that underlie the pathogenesis of idiopathic interstitial pneumonia (a specific disease process is coupled to expanding distinctive needs of older adults. Management of infectious diseases and metabolic stress is critical to enable older adults to live independently, with prevailing goals of enhancing function and quality of life in older adults. His expertise in cardiovascular disease and clinical care is complemented by broad expertise in pertinent cellular sciences.

Soon after arriving to Pittsburgh, Dr. Forman received funding from the Aging Institute to pursue a novel pilot study of nitrite supplementation in older heart failure patients. The study showed that nitrites improved bioenergetics in skeletal muscle and mitochondrial import machineries of mitochondria proteins, particularly the stress-induced regulation of mitochondrial biogenesis.

Dr. Forman’s research on older adults at the University of Pittsburgh is multifaceted, extending from novel approaches of interstitial care in older adults to cellular and subcellular mechanisms, all with prevailing goals of enhancing function and quality of life in older adults. His expertise in cardiovascular disease and clinical care is complemented by broad expertise in pertinent cellular sciences.

As part of its research mission, the Aging Institute also is helping to train a new generation of novel holistic approaches to prevent and treat age-related disease.

Though Dr. Forman’s initial research focused on older adults with cardiovascular disease, his studies have expanded to include those with and without cardiovascular disorders. He is the principal investigator of a cardiovascular rehabilitation trial that has flourished and Dr. Forman has advanced as a national leader in efforts to broadly integrate genetic precepts into specialty medicine in order to better achieve care that responds to the distinctive needs of older adults. Management of a specific disease process is coupled to expanding insights regarding associated frailty, comorbidity, cognitive decline, frailty, and other healthcare challenges that become pervasive with age and which commonly confound standard medications, procedures, and assessments. His leadership in the American College of Cardiology, the American Heart Association, the American Geriatrics Society, and the National Institutes of Health have catalyzed relatively more novel holistic approaches to patient care, and have even sparked funding initiatives to further grow the field.

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Innovations in Research

A primary goal of the Aging Institute is to foster innovative, pioneering, and multidisciplinary age-related research. Through the Seed Grant program and other initiatives, the Aging Institute is encouraging new and novel research aimed at improving the quality of life and care for older adults. Many of these “seed” projects have gone on to receive additional outside funding, expanding their reach and advancing the development of pioneering insights.
RAVEN: At the Frontline of Care for Older Adults

With two years remaining in Phase II of the initiative, RAVEN continues to make a difference. For the last six years, UPMC Senior Services and the Aging Institute have spearheaded a groundbreaking, multiphase innovation project known as RAVEN (Reducing Avoidable Hospitalizations Using Evidence-based Interventions for Nursing Facility Residents). The initiative is designed to improve the quality and reduce the cost of care for skilled nursing home residents enrolled in Medicare and Medicaid.

In 2012, UPMC was one of only seven organizations nationwide to receive a healthcare innovation award from the Centers for Medicare and Medicaid Services (CMS). Phase I of RAVEN focused on 18 long-term care facilities, bringing nurse practitioners onsite to support nursing staff, enhanced staff training, and develop customized communication tools to empower staff. The $19 million award featured the introduction of telemedicine, enhanced medication review, and pharmacy engagement — all with the collective goal of reducing avoidable hospitalizations among nursing home residents.

Based on the successes of its evidence-based innovations, UPMC’s RAVEN initiative received an additional four-year, $20 million award from CMS in 2016. Phase II continues to build on the program’s past successes while introducing a new payment model based on a facility’s ability to proactively manage six health conditions that historically result in hospitalization for older adults, such as urinary tract infections, pneumonia, and congestive heart failure.

“In addition to integrating the new payment, we’ve also expanded our reach and impact to include 35 nursing homes statewide — nearly double the number of facilities we worked with during Phase I,” says RAVEN co-director April Kane, MSH, LW, at UPMC Community Provider Services.

“We’re honored to continue our work in this promising program,” says Mary Ann Sander, MHA, MBA, NHA, vice president of Aging and Disability Services, UPMC Community Provider Services and RAVEN co-director. “RAVEN is helping to develop new models of care that can deliver better health, improved care, and lower costs for older adults who often have the greatest healthcare needs.”

RAVEN in Action on the Job

When Vicky Wittack, senior vice president of Brevillier Village and Ball Pavilion’s administrator, first learned about RAVEN, she immediately knew its residents would benefit from the creative, best practice offerings. “We serve a very middle income population and our facility never could have afforded the expertise of such an experienced nurse practitioner like Sharon,” says Vicky.

Sharon’s nursing background includes experience in cardiac, long-term, and hospital-based palliative care, where she often saw nursing home residents “being hospitalized with conditions that probably could have been better managed in place.”

“Once I heard about RAVEN, I was excited to bring it to Brevillier Village in Erie, Pennsylvania,” says Sharon. “I worked with the attending physician or I can be there in person. When a resident is having a medical problem, I’m able to evaluate the condition with the RN that very day using telemedicine, rather than delaying until the attending physician or I can be there in person.”

RAVEN co-director April Kane, MSH, LW, at UPMC Community Provider Services.

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“RAVEN is helping to develop new models of care that can deliver better health, improved care, and lower costs for older adults who often have the greatest healthcare needs.”

When RAVEN first came to Brevillier Village, the Skilled Nursing Unit, we sent Sharon to train our staff. She provided telemedicine visits to 20 residents in the first three days of the pilot program. Now she’s back, providing care to four additional residents. Sharon says RAVEN’s telemedicine initiative is key to providing effective and immediate care.

“With the RAVEN initiative, I can be there in person. It’s inspiring us to look for new ways to continue its impact.”

2017 Seed Grant Update: Early Hearing Screening: Identification and Intervention in Older Adults

Hearing loss can have a significant impact on quality of life, but many older adults are unaware their hearing has been compromised. It can lead to isolation and depression and even be misinterpreted as a loss in cognitive function.

Catherine Palmer, PhD, director of Audiology and Hearing Aids, UPMC, and associate professor in the departments of Communication Science and Disorders in the School of Health and Rehabilitation Sciences and Otolaryngology in the School of Medicine, University of Pittsburgh, received a two-year seed grant from the Aging Institute in 2017 to research GATE: Geriatric Auditory Testing for Everyone. Her study aims to find the most cost-effective way to identify hearing loss in seniors early on — before it has a negative impact on their social, mental, and physical well-being.

“I can’t sing the praises of the RAVEN initiative strongly enough,” adds Vicky. “Our hope is that CMS sees the full benefits it can offer facilities like ours. It’s inspiring us to look for new ways to continue its impact.”
In May 2018, the Aging Institute was among the lead sponsors of the “A Day in the Lifespan” conference at the University of Pittsburgh, which examined the development, influence, and trajectory of biological processes across the lifespan. Co-sponsoring the event were the Clinical and Translational Science Institute (CTSI) of the University of Pittsburgh and Magee-Womens Research Institute. The dialogue conference, which brought together academicians and clinicians to create connections throughout the world of research, featured an emphasis on aging and the developmental origins of health and disease. Presenters included researchers from the National Institutes of Health (NIH), National Institute on Aging, the Ohio State University, the University of Wisconsin, and the University of Pittsburgh. Their topics ranged from the developmental origins of health and diseases to in vitro and in vivo models of caloric restriction, and from aging biology to mutations that affect sleep, cognitive function, and lifespan in animal models.

“My goal was to stimulate a deeper conversation on well-being throughout the spectrum of life,” says Yeud Sadeovsky, MD, executive director of Magee-Womens Research Institute and associate dean, women’s health research and reproductive sciences, University of Pittsburgh. “For example, people tend to think about pregnancy as largely a woman’s issue, but we now know that what happens at the start of life has far-reaching implications for the health and understanding of our overall quality of life.”

She and her team conducted hearing screening tests of nearly 1,000 seniors, all of whom had had a recent geriatric evaluation that included hearing loss. She pointed to studies showing that 60 percent associated with hospital readmissions. Early problem. “Our data indicates patients simply don’t correct, or amplify, their hearing because of cost and accessibility issues. Her study points to a bigger solution before it has a negative impact on their lives.”

The conference really epitomized the spirit of collaboration and sharing that is a signature trait of the University of Pittsburgh and UPMC,” notes Toren-Finkel, MD, PhD, director of the Aging Institute. By engaging people from diverse disciplines, and whose research and practice focuses on very different areas within the lifespan, we’re able to broaden our insights and understandings exponentially.”

Plans are now underway for a 2019 conference on gerontology.

Editor’s Note: CTSI’s part of the NHLBI-funded nationwide network offers the support necessary to bridge the gap between innovative research and its implementation in community and community-engagement research. Magee-Womens Research Institute and the Aging Institute in the United States dedicated exclusively to women’s health and disease, is the largest research affiliate of the University of Pittsburgh and UPMC.”

Seed Grant Program 2018: Collaboration in Aging Research

Core to the success of the Aging Institute has been its constant emphasis on bringing together the best and brightest minds to analyze, research, and develop solutions in the field of aging. Its annual seed grant program is a celebration of collaborative and academic efforts. In 2018, the program’s theme — Collaboration in Aging Research — exemplified that spirit.

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The Aging Institute’s 12th Annual Research Day on Aging was held on December 6, 2018 on the campus of the University of Pittsburgh. A signature event of the Aging Institute, Research Day provides an essential forum for clinicians and researchers from UPMC, the University of Pittsburgh, Carnegie Mellon University, Duquesne University, Robert Morris University, and other academic institutions to meet, interact, and view posters highlighting the latest in aging research.

This year’s session opened with welcoming remarks by Toren Finkel, MD, PhD, director of the Aging Institute of UPMC Senior Services and the University of Pittsburgh. Dr. Finkel also joined in a collaborative presentation on the topic of Innovative and Emerging Research in Aging with Anne B. Newman, MD, MPH, clinical director of the Aging Institute, Anthony Delitto, PhD, PT, FAPTA, dean of the School of Health and Rehabilitation Sciences at the University of Pittsburgh, and Matthew D. Neal, MD, FACS, Roberta G. Simmons assistant professor of surgery at the University of Pittsburgh.

The poster session at this year’s event featured more than 50 presenters on a range of topics. Winners in the different categories of submissions included the following students, researchers, and clinicians:

Basic Student - First Place (tie)
Abish Pius
AAV Delivery of α-Klotho: Gene Therapy as a Strategy to Counteract Sarcopenia
Amrita Sahu, MS
Role of α-Klotho in Muscle Progenitor Function and Skeletal Muscle Regeneration

Basic Student - Honorable Mention
Amanda Kowalczyk
Identifying the Genetic Basis of Longevity in Mammals Using Patterns of Convergent Evolution

Basic Post-Doctoral - First Place
Diana Alvarez, MD
Defective Fatty Acid Metabolism Promotes Fibrosis in the Lung

Basic Post-Doctoral - Honorable Mention
Hye Jin Hwang, PhD
Spatiotemporal Regulation of Fatty Acid Desaturation in Long-lived Germline-less Animals

Basic Faculty - First Place (tie)
Aditi Gurkar, PhD
Endogenous DNA Damage Plays a Causal Role in Cardiomyopathy
Yusuke Sekine, PhD
The Nucleolus Links Acetyl-CoA fluctuation to p53-mediated Stress Responses

Basic Faculty - First Place
Jessica Graves
Rest-activity Rhythm Timing and Depression Symptom Severity in Dementia Caregivers

Clinical Student - First Place
Loren Sheets, MS
Geographic Variation in Antidementia Medication Use Among Medicare Part D Beneficiaries with Alzheimer’s Disease

Clinical Student - Honorable Mention (tie)
Mary Winger, MPH
Longitudinal Changes in Strength and Fall Injuries in Medicare Claimants: The Health ABC Study

Clinical Post-Doctoral - First Place
Joshua Niznik, PharmD
Factors Associated with De-prescribing Antidementia Medications in Older NH Residents with Severe Dementia

Clinical Post-Doctoral - Honorable Mention
Samantha Fusari, MSc, PhD
High Inter-muscular Fat is Associated with Poor Mobility Function in Older Adults, Only When Accompanied by Low Muscle Area

Clinical Faculty - First Place
Gustavo Almeida, PT, PhD
Effect of Changes in Physical Activity on Cartilage Degradation and Inflammation in Knee Osteoarthritis

Clinical Practitioner - First Place
Aziza Battle, MA
Kane County Living Centers Unit 4a

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In hospitals and homes, from clinicians to caregivers, the Aging Institute is educating — and inspiring — audiences on the tremendous physical, mental, and social challenges facing our aging population. It continues to share aging-related insights, knowledge, and findings through its educational training programs, community outreach, literature, and videos aimed at enriching the direct care and treatment of aging adults today and tomorrow — and at helping older adults to not just live longer, but healthier, lives.
A Regional Partner on the National Geriatrics Workforce Enhancement Program

Recognizing the dire shortage of skilled geriatric specialists and providers in our country, in 2015 the U.S. Department of Health and Human Services launched the Geriatric Workforce Enhancement Program (GWEP). The three-year, $38.7 million program was designed to develop the health care workforce and quality care for older adults through community-based programs, preparation of health providers and training opportunities for healthcare workers. In July 2017, the program was extended through July 2019.

The University of Pittsburgh is one of 44 sites around the country that receive GWEP funding — one of only four programs focused directly on older adults. It is led by Richard Schulz, PhD, associate director of the Aging Institute and professor of the University of Pittsburgh’s University Center for Social and Urban Research (UCSUR).

Given its long-term expertise in supporting the care workforce and quality care for older adults, the Aging Institute has been a GWEP community partner since the inception of the GWEP Initiative. In 2015, the institute entered into a partnership with the University of Pittsburgh over the last four years as a GWEP community partner. It’s often the day-to-day details of caring for an older adult that can be the most overwhelming. To support caregivers in their daily efforts — and reinforce that they are not alone — the Aging Institute has developed a series of six free videos as part of the GWEP Initiative.

“Building on the Institute’s focus on dementia, the new videos spotlight typical issues that dementia caregivers face.”

The videos are available to interested caregivers and family members, and professionals and can be accessed on the Institute’s website.

Creating a National Model for Caregiving

The Aging Institute has long supported local, statewide, and national efforts to enhance care related to caregiving. At the forefront of these initiatives has been the institute’s associate director for education and executive board member, Richard Schulz, PhD, distinguished service professor of psychiatry at the University of Pittsburgh and a nationally recognized researcher on caregiving and caregivers.

Most recently, Dr. Schulz spearheaded The Caregiver Project, a two-year, $1 million initiative focused on making western Pennsylvania — which has one of the highest proportions of older adults in the nation — a national model of a “culture of caregiving” by partnering with caregivers, patients, providers, and community stakeholders to conduct applied research that would inform policy and practice regionally.

Central to its research agenda was the Pittsburgh Regional Caregivers Survey, led by Dr. Schulz and Scott R. Beach, PhD, interim director of the University of Pittsburgh’s University Center for Social and Urban Research. More than 1,000 caregivers participated in the survey, which revealed that southwestern Pennsylvania significantly exceeds the national averages reported by family caregivers on the stressors and challenges they face.

The results of the Pittsburgh Regional Caregivers Survey are at: https://ucsur.pitt.edu/caregiving_.

In July 2018, Dr. Schulz was named the director of the newly-created Center for Caregiving Research, Education, and Policy, launched by the University of Pittsburgh Health Policy Institute. It aims to increase awareness about the important role of family caregivers in the healthcare system, conduct priority research in family caregiving, and educate providers and family members so caregivers can more effectively care for their loved ones as well as themselves.

“Research and implementation studies from the center will provide evidence to guide both practice and policy development on how to best support caregivers and fully integrate the health system,” says Everette James, JD, MBA, director of the Health Policy Institute.

“In many ways, the need for a center evolved out of the Aging Institute’s Caregiver Workshop, which gave us the opportunity to identify and partner with researchers and experts across UPMC and the University of Pittsburgh,” says Dr. Schulz. “We have a remarkable depth of expertise that ideally positions us to become a national leader in caregiving research and public policy.”

“Creating a National Model for Caregiving

Pioneering research on the needs of area caregivers has led to the creation of a groundbreaking new center focused on caregiver research, education, and policy.”

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Help and Referral Line Initiatives

As a GWEP partner, the Aging Institute has expanded the capabilities and resources of its Help and Referral Line to connect greater numbers of caregivers and older adults to important community information, services, and resources. Additionally, the Institute is also working to increase awareness and use of these resources among healthcare providers.

“The call line is critically important to GWEP’s success. It’s serving as a primary point of entry for providers as well as their patients and family members,” says Dr. Schulz.

In 2018, the Institute began the process of exploring an electronic health record system used by UPMC and many other healthcare systems — as a referral resource for doctors and other healthcare providers. “It’s our goal to use this platform to capture referrals through EPIC, but also to be able to provide feedback and follow up to the practitioner on the recommended resources,” explains Melissa Jones, MSN, RN, who joined the Institute in 2018 as a geriatric-nurse educator. “Our first accomplishment was getting established as a ‘SmartText’ in EPIC. This phrase provides written information on our website and the Help and Referral Line for ease of reference among providers and their patients.”

The full incorporation of the Help and Referral Line into EPIC will broaden access to resources and services related to health maintenance and healthcare, which are key focus areas of the GWEP, and services related to health maintenance and healthcare, which are key focus areas of the GWEP, and services related to health maintenance and healthcare, which are key focus areas of the GWEP, and services related to health maintenance and healthcare, which are key focus areas of the GWEP.

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Helping underserved areas

Locally, the GWEP has turned its attention to underserved areas that have large numbers of lower income, older, frail adults. The goal is to ensure that seniors in these communities get recommended health screenings, or assessments, during primary care visits. However, most primary care doctors — who are on the front lines of treating older adults — have little to no training in geriatrics.

Throughout 2018, the Aging Institute worked with GWEP to help support primary care offices in the greater McKeesport area through its UPMC McKeesport Resource Center, as well as through mailings, personal visits, and social media. The Institute is working to assist GWEP to help doctors and other healthcare providers to better understand aging issues, and provide geriatric training to properly assess and treat older patients.

New and ongoing educational programming

Throughout 2018, the educational arm of the Aging Institute made dozens of presentations and launched new initiatives on age-related topics to healthcare professionals, community groups, colleges and universities, caregivers, and older adults in Western Pennsylvania and statewide. Direct mail, advertising, and social media initiatives helped to build awareness of the Institute’s robust portfolio of educational services. In addition to our new programs, we’re seeing renewed interest in our traditional training and certificate programs, such as Ageless Wisdom™ — not only within the UPMC system but at healthcare organizations and community groups statewide,” notes Dr. Schulz.

The immediate past president of the American College of Preventive Medicine, Dr. Park is a leading national advocate for public health, preventive medicine, and consumer-driven health plans. His comments focused on the role of plant-based diets as key to longer and healthier living, noting that research indicates they can reduce diabetes by 91 percent, heart disease by 80 percent, and cancers by 60 percent. He also stressed the importance of 30 minutes of moderate physical activity every day to reduce injuries and other health risks.

The program also featured these staff members from the UPMC Center for Integrative Medicine and their topics:

- **Medical Director** Ronald Glick, MD — Integrative approaches to managing osteoarthritis
- **Naturopathic Doctor** Khara Lucia, ND, FABNO — Supplements and aging
- **Psychotherapist** Barbara Iwets, LCSW — Mindfulness techniques for stress reduction

Held at Cumberland Woods Village in Allison Park, Pennsylvania, the program also featured two therapists from the Center for Integrative Medicine, who providedatsu-shiatsu massage therapy, a form of Japanese therapy that stimulates acupressure points to promote energy and balance.
Integrating Geriatric Training in the Career Ladder at UPMC

For many years, the Aging Institute has been collaborating with UPMC Senior Communities to promote the professional development of its nurses and nurses’ aides through geriatric training. Offered quarterly, Senior Communities staff members who successfully complete the Institute’s Geriatric Nurse Aide Training or Geriatric Resource Nurse Training program now receive an increase in compensation, and are eligible for an additional increase after completing an approved project. Lighthouse Pointe Village and Cumberland Woods Village hosted 2018 geriatric training classes for participating staff from all UPMC Senior Communities’ facilities.

Monitoring and Building Brain Health

A new overview program for the general public on brain health in older adults was introduced in 2018 at UPMC McKeesport and the Cranberry (Pennsylvania) Municipal Building, covering such topics as:

- The connection between medications and confusion
- The impact of too little sleep on brain health
- Warning signs that something serious may be happening
- The role of diet and increased activity in improving brain health

Making a Transition

Making the move into a nursing or personal care facility can pose painful and unexpected challenges for older adults. To address these concerns, the Aging Institute developed a new program in 2018 for new residents, which covers topics such as fitting in, meeting people, making new friends, and adapting to a new lifestyle. The program was introduced at Seneca Hills Village, a UPMC Senior Community.

Strategies and Training for Wandering Adults with Dementia

In 2018, the Aging Institute continued to play a leadership role in educating law enforcement and first responders to the specialized needs of adults with dementia who wander from their home or care facility. A presentation was developed for emergency medicine services (EMS) workers, police and fire professionals, social workers, and others involved in such searches. Based on the groundbreaking work of Robert J. Koester, PhD (the featured guest of the Institute in 2017 at a training program on the subject), the presentation was delivered at UPMC Magee-Women’s Hospital and VOICE PA (formerly the PA Culture Change Coalition), which was telecast to 25 organizations statewide. To help build general public awareness of the subject, Ms. Robison participated in UPMC Health Plan’s Caregiver Teletown Hall, hosted by former Pittsburgh Steeler Charlie Batch.

The Institute also developed additional training focused on the specialized challenges faced by rural volunteer search and rescue teams — and its canine members — which emphasized the need to educate community members on the need to secure homes and facilities. The presentation was delivered in November 2018 at a two-day training program sponsored by the Fayette County Search and Rescue Team in Hopwood, Pennsylvania. Hailing from five states, the participating volunteers contribute their own time and resources to become certified in search and rescue, as well as learning the cost and time of training their dogs.

NOTE: The Aging Institute website features a downloadable worksheet and tips for caregivers of adults with dementia with a tendency to wander on its Resources for Caregivers page.
Gerontology Scholarship Winners

Deborah Keyes
UPMC Hamot

“...a desire to better serve her older patients prompted her to apply for the Aging Institute’s graduate certificate in gerontology scholarship....”

2017 Scholarship Recipients

Deborah Keyes
Dialysis Nurse
UPMC Hamot

“I think of myself more as an advocate than a student. I’m learning how I can better represent a vulnerable population.”

Christina Chodor-Papst
Product Development Specialist
UPMC Health Plan–Product Development

“...as a community health worker with the UPMC Health Plan, Aliurga Wakefield-Fourmy works hard to keep members connected to their primary care doctors and help them avoid the emergency department. ...”

2018 Scholarship Winners

Renee Bristow
Physical Therapy Assistant
UPMC Sugar Creek Station

“I’ve learned that you need a lot of patience working with older adults, plus good listening skills. It’s important to really hear their concerns, not just lecture them or tell them what you want.”

Christina Chodor-Papst
Product Development Specialist
UPMC Health Plan–Product Development

“I want to be an advocate for programs that foster healthy habits and preventive care with the goal of preventing or postponing physical decline.”

As a service coordinator at UPMC Western Psychiatric Hospital, Christina Chodor-Papst took on the role of caregiver for both of her parents. She also juggled responsibilities as a product development specialist with the UPMC Health Plan, where her team has focused on the benefits of hearing tests and hearing aids in preventing Alzheimer’s disease.

Victoria Glass
Senior Coordinator
UPMC Western Psychiatric Hospital

“Helping others has been a dream of mine since I can remember. This program is allowing me to get the education I need to continue to help others.”

As a service coordinator at UPMC Western Psychiatric Hospital, Victoria Glass has spent the past two years working closely with patients of all ages, including older adults. “I enjoy every second of it,” says Ms. Glass, a graduate of the University of Pittsburgh with a bachelor’s degree in social work. She helped care for both of her parents. She also juggled responsibilities as a product development specialist.
Erika Williams, RN
Staff Nurse
Erika Williams knows the ups and downs of her job. “Being able to be a part of the family makes everything worth it,” she says. Her passion for her patients inspired Erika as she worked her way up from a certified nurse’s aide to licensed practical nurse to registered nurse. Now, as she pursues a graduate certificate in gerontology, Ms. Williams hopes to set an example for her twin sons. “Sometimes it is not about what is easiest, it is about working hard for something that matters,” she says.

Inspiring Tomorrow’s Geriatric Professionals
Each year, the Aging Institute participates in the Health Career Scholars Academy—a unique summer program offered to gifted high school students statewide by the University of Pittsburgh. These talented teenagers travel to Pittsburgh to examine critical issues and emerging career opportunities in healthcare. During the 2018 program, students choosing the geriatric concentration received an in-depth look at the daily work of healthcare providers who are better able to identify and collaborate across the care spectrum to improve health outcomes. “We’re thrilled to be a community partner for this initiative,” says Melissa (Misty) Skok, MSW, LCSW, director of the Living-at-Home program. “This is about working hard for something that matters,” she adds.

“I learned if I truly want to improve the quality of care for my patients and conditions for nurses, I needed to continue to seek more education and knowledge.”

Having worked as a nurse in long-term care facilities for nearly a decade, Erika Williams knows the ups and downs of her job. “Being able to be a part of the family makes everything worth it,” she says. Her passion for her patients inspired Erika as she worked her way up from a certified nurse’s aide to licensed practical nurse to registered nurse. Now, as she pursues a graduate certificate in gerontology, Ms. Williams hopes to set an example for her twin sons. “Sometimes it is not about what is easiest, it is about working hard for something that matters,” she says.

Inspiring Tomorrow’s Geriatric Professionals
Each year, the Aging Institute participates in the Health Career Scholars Academy—a unique summer program offered to gifted high school students statewide by the University of Pittsburgh. These talented teenagers travel to Pittsburgh to examine critical issues and emerging career opportunities in healthcare. During the 2018 program, students choosing the geriatric concentration received an in-depth look at the daily work of healthcare providers who are better able to identify and collaborate across the care spectrum to improve health outcomes. “We’re thrilled to be a community partner for this initiative,” says Melissa (Misty) Skok, MSW, LCSW, director of the Living-at-Home program. “This is about working hard for something that matters,” she adds.

“I learned if I truly want to improve the quality of care for my patients and conditions for nurses, I needed to continue to seek more education and knowledge.”

Having worked as a nurse in long-term care facilities for nearly a decade, Erika Williams knows the ups and downs of her job. “Being able to be a part of the family makes everything worth it,” she says. Her passion for her patients inspired Erika as she worked her way up from a certified nurse’s aide to licensed practical nurse to registered nurse. Now, as she pursues a graduate certificate in gerontology, Ms. Williams hopes to set an example for her twin sons. “Sometimes it is not about what is easiest, it is about working hard for something that matters,” she says.
issues that are shaping political agendas in Harrisburg and Washington, D.C.

“The goal was to encourage open dialogue and collaboration around policies that are responsive to the needs of the aging population and caregivers,” says Nicole Fideli, who helped coordinate the forums and now serves as director of Public Policy and Engagement at UPMC.

The initial PAC forum held in 2015 was inspired by the passage of the Improving Medicare Post-Acute Care Transformation (IMPACT) Act of 2014 and its effect on skilled nursing facilities and home health agencies. Key speakers included Barbara Gage, PhD, of the Post-Acute Care Center, a national expert on Medicare post-acute care policy issues and an architect of the IMPACT Act, and policy experts from LeadingAge, the national association for nonprofit providers of aging services.

The 2017 PAC forum featured leaders from the National Hospice and Palliative Care Organization (NHPCO), including President/CEO Ed Banach, JD, with discussions focused on end-of-life care, the importance of advanced directives, and the work of UPMC’s own palliative care program.

The program’s format has proven so popular that in November 2018 the initiative developed a related forum titled “Election Reflections” and brought in state and national policy influencers to discuss implications of the November election, including its impact on important aging-related issues.
Sharing knowledge and resources with the community is central to the mission of the Aging Institute. Through this dissemination and outreach, we are building awareness and empowering older adults, their families, and caregivers, providing them with the tools for informed decision-making and access to critical support. Through these and other efforts, we are also forging powerful relationships with a host of medical, community, public health, legal, advocacy, and faith-based organizations to enlarge the network of expertise available for older adults’ lives.
The Aging Institute Help and Referral Line

In 2018, calls to the Aging Institute Help and Referral Line continued to increase — as did the complexity and diversity of caller questions received.

“A big part of the call line’s growth is due to the Institute’s increased promotional efforts with doctors, practice managers, and other healthcare providers through our partnership over the last four years with the national Geriatric Workforce Enhancement Program (GWEP),” explains Ronnie Edwards, MSW, LSW, the Institute’s Aging and Disability Coordinator (see page 28). “Working together, we’re creating a centralized regional call line that older adults, caregivers, and healthcare providers can rely upon for expert help and links to community resources.”

According to Ms. Edwards, healthcare professionals now comprise 25 percent of all calls. “We’re hearing shared ideas and resources with caregivers and providers through our partnership over the last four years with the national Geriatric Workforce Enhancement Program (GWEP),” explains Ronnie Edwards, MSW, LSW, the Institute’s Aging and Disability Coordinator (see page 28). “Working together, we’re creating a centralized regional call line that older adults, caregivers, and healthcare providers can rely upon for expert help and links to community resources.”

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Both Ms. Edwards, a licensed social worker, and her colleague Melissa Jones, MSN, RN, a geriatric nurse educator, are the voice of the Help and Referral Line. “Our professional backgrounds enable us to look at a caller’s problem with very different perspectives,” says Ms. Edwards. “That’s a real distinction and value that we offer callers.”

The service is free and open to anyone, regardless of location, level of need, or insurance affiliation. And in 2018, for the first time, the Institute offered opportunities for callers to participate in live chats and webinars. “Doing so allows us to engage in more extended discussions on a particular topic,” says Ms. Edwards. “We’re looking forward to doing more of them next year.”

Sharing Resources for Older Adults

As part of its efforts to promote awareness of the needs of caregivers, in May 2018, the Aging Institute presented a half-day program focused on sharing ideas and resources with caregivers and professionals who support older adults in our region.

Held at Cumberland Woods Village, the event – Resource Networking in the Care of Older Adults — featured speakers from the Aging Institute and the Allegheny County Health Department.

Jennifer Blatz, AARP Pennsylvania’s associate state director for community outreach, discussed AARP’s Livable Communities initiative to make neighborhoods, towns, cities, and rural areas more age-friendly so older adults can stay in their communities as they age. The program focuses on helping communities create environments that can enable older adults to thrive — from transportation and social inclusion to housing, communication, and employment. She also explained how to access the valuable resources available through the program, including AARP’s Network of Age-Friendly Communities — an initiative affiliated with the World Health Organization’s Age-Friendly Cities and Communities Program.

Hannah Hardy, program manager of the chronic disease prevention program with the Allegheny County Health Department, talked about the county’s ambitious and comprehensive Livable Whole Community program aimed at improving the health and wellness of county residents of all ages. She encouraged participants to become active partners with the Live Well Allegheny program to sustain and grow its successes.

Ms. Hardy also provided information on county resources of special interest to older adults and their caregivers, ranging from food access (Just Harvest), to fall prevention (Matter of Balance and STEADI) and driver safety (CarFit). NOTE: Over the summer of 2018, Aging Institute staff received training in Matter of Balance and CarFit and began offering classes for interested older adults and caregivers.

The Aging Institute at UPMC McKeesport

In 2018, the Aging Institute’s commitment to supporting underserved older adults and their caregivers in the nearby Pittsburgh community of McKeesport continued to grow through a concentrated effort to broaden community outreach and increase educational programming. In 2014, the Aging Institute at UPMC McKeesport Resource Center opened in collaboration with the McKeesport Hospital Foundation. According to the United States Census Bureau, nearly one in five adults living in the city of McKeesport, a suburb of Pittsburgh, is over the age of 65 — and nearly 40 percent of these adults live on an annual income of $20,000 or less.

“We’ve increased our outreach efforts to other community partners, working with the Salvation Army, area church leaders, antipoverty centers,” says geriatric nurse educator Ms. Jones, the Aging Institute’s newest staff member. “We’re also aligned efforts with the 9th Street Clinic in McKeesport, a non-profit that provides non-emergency basic services to individuals who cannot afford primary care health insurance.”

“We encourage older adults and caregivers to drop in to meet with us to discuss any problems they have and to connect to community resources,” says Ms. Jones. “Free educational programs and classes for older adults and caregivers.”

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In 2018, these programs covered a wide range of topics, including:

- Fraud
- Financial planning for care
- Hospice care
- Wandering/lost behavior
- Suicide
- Caring
- Elder law
- Navigating community resources

Additionally, through its relationship with the Allegheny County Department of Elderly Services, the Aging Institute at UPMC McKeesport provides financial planning for care and information about community resources.

In Fall 2018, Ms. Jones introduced Matter of Balance classes at the Aging Institute Resource Center at UPMC McKeesport, Turtle Creek Senior Center, and at William S. Moorhead Towers in Oakland, an independent living community serving older adults who are visually impaired.

The program was well received, with participants expressing interest in learning about strategies to help them overcome their fears of falling. The Aging Institute had the opportunity to facilitate the engagement of three students from the University of Pittsburgh’s School of Engineering in the program, which targeted vision and hearing impairments and the class as a fall prevention tool.

The students used feedback from the participants to modify prototypes for a fall detection device they were developing for the class project. The students shared assistive devices that can help mitigate the risk of falling.

Professor and occupational therapist Pamela E. Toto, PhD, OTR/L, School of Health and Rehabilitation Sciences at the University of Pittsburgh, is a master trainer for the Matter of Balance program. She also was the 2017 Geriatrician Teacher of the Year Award by the Pennsylvania Geriatric Society for her contributions to improved care for older adults. Dr. Toto made a huge impact when she failed to participate in our McKeesport and Turtle Creek residents.

Ms. Jones demonstrated the correct way to fall and offered strategies on how to stand up again. She also discussed the importance of balance exercises and physical activity to improve balance and strength. The participants were encouraged to engage in regular physical activity to help prevent falls.

Matter of Balance, an award-winning program created by the Maine Department of Aging, Health, and Wellness, is designed to help seniors overcome their fears and become more active. This year, Ms. Jones completed a course to become a master trainer for the Matter of Balance program. She also completed a course to become a master trainer for the Matter of Balance program.

Additionally, through its relationship with the Allegheny County Health Department and the University of Pittsburgh Department of Occupational Therapy, the Aging Institute staff pursued training and began conducting training in Matter of Balance taught by master trainers through the Allegheny County Health Department. The eight-week, two-hour classes focus on developing coping strategies to address the fear of falling, including ways to increase balance and mobility.

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Celebrating Senior Champions

What began as a dinner in 2009 to recognize the 20th anniversary of Seneca Place and the genesis of UPMC Senior Communities has marked its tenth year of recognizing remarkable individuals and organizations who have created a better life for seniors and caregivers living in western Pennsylvania. Since its inception, “Celebrating Senior Champions” has presented more than $1.1 million in net proceeds to further charitable care for frail seniors who have outlived their financial resources. UPMC Senior Services hosted this signature event on October 18, 2018.

“These honorees play a critical role in developing the clinical and human service platforms needed to improve the lives of seniors in western Pennsylvania and nationally,” said Deborah Brodine, president of UPMC Community Provider Services. “UPMC Senior Services is proud to recognize their exemplary work.”

The 2018 Grand Champion is Anne B. Newman, MD, MPH, Distinguished Professor and Chair of the Department of Epidemiology and Director of the Center for Aging and Population Health (CAPH) in the Graduate School of Public Health, with a joint appointment in the Division of Geriatric Medicine in the School of Medicine at the University of Pittsburgh. She has also been newly appointed as the Clinical Director of the Aging Institute of UPMC Senior Services and the University of Pittsburgh. Dr. Newman plays a critical role in developing the clinical platforms needed to translate basic science discoveries into population health and patient care. Internationally renowned for her work in the epidemiology of aging, longevity, and disability, Dr. Newman's research has defined the impact of apparently subclinical disease on physical, cognitive function, and on the metrics of healthy aging. She conducts clinical trials to prevent disability using physical activity, weight management, and medical therapies.

The 2018 Community Champion is the United Way of Southwestern Pennsylvania under the leadership of President and Chief Executive Officer, Robert Nelkin. Helping our region’s seniors live healthy lives is one of four core pillars of United Way’s work. To help address the unmet needs of seniors, United Way launched “Open Your Heart to a Senior” in 2012, connecting caring adults with seniors who need extra assistance to remain safe at home and who would benefit from companionship to combat isolation and loneliness. Since then, thousands of seniors and volunteers have developed enriching relationships each year, helping seniors prolong their health, happiness, and independence. Through innovative leadership, financial investment, volunteerism, public education, and strategic local partnerships, United Way is keeping the time, talent, and experience of seniors tightly woven into the fabric of our community, making the region stronger, more vibrant, and more economically secure.

Richard Schulz, PhD is the 2018 Caregiver Champion. Dr. Schulz is a Distinguished Service Professor of Psychiatry and Director of Gerontology at the University of Pittsburgh. His work focuses on social-psychological aspects of aging, including the impact of disabling late-life disease on patients and their families. Funded by the National Institutes of Health for more than three decades, Dr. Schulz conducts descriptive, longitudinal, and intervention research on diverse older populations representing illnesses such as cancer, spinal cord injury, stroke, Alzheimer’s disease, heart disease, and arthritis. He is a leading contributor to literature on the health effects of caregiving. Additionally, Dr. Schulz is exploring supportive interventions, including technology-based approaches designed to enhance patient functioning and quality of life of both patients and their relatives.
A recognized pioneer in the field of geriatrics, the University of Pittsburgh remains among the foremost institutions of higher learning to lead research focused on improving the care and quality of life of older adults. Through decades of collaborative and multidisciplinary research — conducted by experts in medicine, public health, nursing, social science, psychiatry, epidemiology, and ethics — our University partners have positioned our region at the forefront of aging-related research and innovation.
Cuijpers P, Patel V, Anderson SJ, Sequeira Dias A, Azariah F, disability associated with mood and cognitive testing novel medication, and other severe mood in the care of older adults investigations that will promote and support. The CLLDPT provides a Prevention and Center for Late-Life scientists, and clinicians at the University of Pittsburgh and UPMC that were published in peer-reviewed journals in 2018. Following is a representative sampling that highlights the remarkable range and diversity of aging-related research initiatives undertaken by researchers, Centers of Excellence Research Publications Highlights

**Finding:** Acute trajectories of functional-impaired individuals is associated with brain's functional architecture. The analysis suggested that findings from previous studies point towards different cognitive domains. The analysis explored the moderator role of the English language and the relationship between amyloid burden and preclinical Alzheimer's disease.

**Finding:** This study tested the hypothesis that brain structural abnormalities are associated with neurodegeneration, and amyloid deposition, particularly, in older individuals. The study was conducted in several independent signals in older individuals with psychosis and to psychotic phenotype in Alzheimer's disease. The study confirmed previous findings that amyloid deposition is associated with longitudinal cognitive decline. The study showed that subjects resilient to psychotic symptoms in Alzheimer's disease had higher levels of synaptic pathology, and amyloid deposition as measured by Pittsburgh Composite (PC)-PET imaging. 

**Finding:** This study examined whether the psychotic phenotype in Alzheimer's disease had a more rapid cognitive deterioration than Alzheimer's disease without psychotic symptoms. The study evaluated preclinical amyloid deposition in that only isolated memory was associated with resilience to psychotic symptoms in the disease. The study assessed whether those individuals with Alzheimer's disease had increased risk of incident dementia and mortality in 1313 mildly cognitively normal and MCI individuals. The study showed that amyloid deposition was associated with psychotic symptoms in Alzheimer's disease. The group with isolated hippocampal atrophy (Aβ+/ND+) showed greater decline in verbal memory. The study confirmed previous findings that amyloid deposition is associated with longitudinal cognitive decline. The study showed that subjects resilient to psychotic symptoms in Alzheimer's disease had higher levels of synaptic pathology, and amyloid deposition as measured by Pittsburgh Composite (PC)-PET imaging. 

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Finding: This study compared risk for clinical outcomes between two divergent study settings addressing this hypothesis.

Center for Aging and Population Health
Director: Alex B. Newman, MD, MPH
The Center for Aging and Population Health (formerly the Center for Healthy Longevity, UPMC) generates new knowledge about the biology of aging, and underscores the critical role of study design in understanding the utility of SCD as a risk marker for AD / cognitive decline. This is one of the first direct comparisons of clinical outcomes between two divergent study settings addressing this hypothesis.

Finding: This report from the Cardiovascular Health Study, a major epidemiologic study of biomarker and physiologic indices with clinical outcomes between two divergent study settings addressing this hypothesis.

Finding: This study demonstrated the critical role of study setting on SCD-associated risk for progression and underscores the importance of consideration of study setting when evaluating the utility of SCD as a risk marker for AD / cognitive decline. This is one of the first direct comparisons of clinical outcomes between two divergent study settings addressing this hypothesis.

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The loss likely increases the amount due to aging. Of lean mass that exceeds who develop HF suffer loss to heart failure (HF) but Obesity is linked Study population. and Body Composition time in the Health, Aging, Forman DE, Santanasto AJ, itself, seems to drive response to DNA damage, which is sustained, however, it activation cannot be supports broadening the separate phenotypes, even may comprise at least two contractions. Using suppressible bladder associated with non- Urge incontinence structural abnormalities... Hanlon found that, this input can reduce problematic medications the use of potentially individuals, and are more problematic to reduce ADRs and behavioral therapy for the development of enhanced... The 3 most phenotype and more... 29:953-960. of biomarker and... 2017; 66:145-149. A comparison of current... 2018 Annual Report - UPMC Senior Services & the University of Pittsburgh. The Aging Institute. 2021; 66:145-149. Finding: Older adults take more... and independence of older... 50 will ≥ and 25% of men Half of women... 2017; 29:953-960. Greenspan SL, Singer A, Cardiological Society of Post-Acute and... American Geriatrics Society... Long-Term Care Medicine. Aging. UPMD.com
Chronic Low Back Pain: A Biopsychosocial Profiles

Rossi M, Perera S. Preliminary Study. Chronic Low Back Pain in Older Adults with and Functional Correlates

Biopsychosocial Profiles

Pain

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Preliminary Study.

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Aging Institute • 2018 Annual Report - UPMC Senior Services & the University of Pittsburgh

People are common,
Balance disorders in older Americans
Pittsburgh Claude D.
disease patients.
Disturbing symptoms in older patients with Parkinson's disease are underlaid by widespread abnormalities in gait, cognitive performance, and a variety of other neuropsychiatric signs. The center brings together faculty from five schools within the University of Pittsburgh: medicine, dentistry, nursing, the business school, and the arts and humanities. This collaborative approach has been very successful. The center brings
outstanding research investigators at the Claude D. Pepper Older Americans Project, as well as the EWGSOP and FNIH have
found that NHPPT had good validity of the NHPPT from the Nursing Home Physical Performance Test (NHPPT), an instrument based guidelines from the American Geriatrics Society.

Using regression modeling, the study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling, the study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling. The study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling. The study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling. The study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling. The study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling. The study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling. The study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling. The study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling. The study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling. The study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling. The study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling. The study examined cross-sectoral associations between WMH volume and COMT Val158Met genotype in a cohort of older adults. NHPPT was found to be a better indicator of proportion of explained variance in terms of regression modeling.
Aging in developing lung adenocarcinoma. Cells with longer telomeres can undergo more cell divisions prior to arrest, increasing the likelihood of acquiring genetic mutations or chromosomal changes that allow bypass of growth arrest, and switching on telomere maintenance pathways that enable unlimited cell divisions.

UPMC Palliative and Supportive Institute (PSI)
Director: Robert Arnold, MD
The PSI was established to improve the quality of life of patients whose diseases are no longer responsive to curative treatments. Its team of health care professionals offers care for patients with life-limiting illness, and provides comfort and support to these patients and their families. The following publications are relevant to today’s trend of focusing on patients’ desires for care at the end of life and the importance of communicating clearly with the patient and physician or clinician.


Findings: This stepped wedge, cluster-randomized trial involved 1420 patients at high risk of death and their surrogates in five intensive care units. The study found that a multicomponent family-support intervention delivered by the interprofessional ICU team did not affect surrogates’ psychological symptoms when compared to usual care, but ratings of the quality of communication and the patient- and family-centeredness of care were higher in the intervention group, and the length of ICU stay was shorter in the intervention group, when compared to usual care.


Findings: This article highlighted important educational, research, and policy challenges related to use of palliative care earlier in the disease course in the context of the opioid epidemic. The authors noted that balanced attention to the morbidity and mortality related to opioid addiction and the morbidity and adverse effects on function and quality of life related to undertreatment of pain in serious illness are needed.


Finding: This review synthesized evidence from randomized clinical trials of palliative care interventions in heart failure. The authors found that the evidence base, while promising, was still in its infancy. Additional high-quality studies are needed, in particular with regards to primary palliative care interventions to address unmet needs earlier and throughout the illness course.
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