New Director, New Directions at the Duke Center for Aging

Heather Whitson, MD, MHS will become Director of the Center for the Study of Aging and Human Development in July, 2019. Dr. Whitson is Associate Professor with Tenure of Medicine and Ophthalmology, and has been at Duke since 2000. She is a geriatrician and clinical investigator, and her work focuses on improving independence and resilience in older adults living with multiple chronic conditions, with particular expertise related to the interface of sensory and cognitive health in late life. She co-leads the Pilot and Exploratory Studies Core in the Duke Pepper Center and the Special Populations Core of the Duke Clinical and Translational Science Institute (CTSI). She is a past Program Chair of the American Geriatrics Society (AGS) and currently chairs the AGS Research Committee. She was the recipient of the 2018 Thomas and Catherine Yoshikawa Award for Outstanding Scientific Achievement in Clinical Investigation.

Dr. Whitson comes to her new role with a deep well of leadership experience both locally and nationally, and works with transdisciplinary teams to advance geriatrics research in numerous ways. Over the last year, in preparation for taking over as Director of the Aging Center, she has led a comprehensive strategic planning initiative. The planning process focused on honoring the history and traditions of the Center and identifying unifying themes for innovative, collaborative work that will

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EDITORIAL
How to Combat Ageist Stereotypes

The Gerontological Society of America and seven other aging-focused organizations are working on an initiative to combat ageist stereotypes. They have issued a report titled, “Gauging Aging: Measuring the Gaps between Expert and Public Understanding of Aging in America.” The report uncovered an important disconnect between pessimistic public opinion and more hopeful reflections from experts and advocates.

According to the report, public perceptions of aging describe this process as:

- **Someone Else’s Problem:** instead of perceiving it as an inherent aspect of development.
- **Undesirable:** associated with decline and deterioration.
- **Personal or familial problem:** rather than a social challenge.
- **Fatalistic:** nothing can be done about it.

In contrast, the report found that experts in aging believe that advances in research, care, and services to expend longevity have opened a world of possibilities for personal, social, and economic contributions by the growing older adult population. These contributions can be leveraged for the benefit of all, but that requires adjusting public institutions, policies, and infrastructure to chip away at outdated ways of thinking.


We need more of this kind of intervention to combat ageist stereotypes.

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*The opinions in this editorial are those of the editor and do not necessarily reflect Center policy.

New Director, New Directions at the Duke Center for Aging (continued)

build on the Center’s legacy and ensure its position going forward as a national leader in the field of aging research. A central theme that emerged from the planning process is “Resilience Across the Lifespan,” and this will guide the vision and strategies for the Center that will be rolled out in the coming months.

The strategic planning process has been both inspiring and clarifying. It was inspiring to hear from a diverse network of partners and stakeholders who value and feel connected to the Center. These perspectives served to clarify the Center’s role as a campus-wide “hub” for aging-related research. “The field of aging lends itself so naturally to trans-disciplinary collaboration. Even before team science was a buzz word, the Duke Aging Center was about linking social, clinical, and basic scientists,” says Whitson. The strategic planning process identified opportunities for the Aging Center to apply its trans-disciplinary formula to national and institutional priorities that align with the Center’s mission. For example, one such priority area is brain aging and dementia. Dr. Whitson has been recently named to lead Duke’s effort to pursue an NIH-funded Alzheimer’s Disease Center (ADC) award, an exciting opportunity for the Aging Center to catalyze and elevate the efforts of many teams at Duke who are innovating in the fight against Alzheimer’s Disease.

Dr. Whitson gives much credit to her long-time mentor and predecessor, Dr. Harvey Cohen, whose leadership and thoughtful stewardship has positioned the Center well for the future. “The excellent reputation of the Duke Aging Center is a big part of the reason that I came to Duke in the first place. I wanted to do research that would address the pressing health needs of an aging America. When I asked my medical school mentors where I should train for that, the answer always included Duke and they always mentioned Harvey Cohen.” As we welcome Dr. Whitson to her new role, we celebrate Dr. Harvey Cohen’s 36-year tenure as Director of the Center for Aging with deep gratitude and appreciation. Dr. Cohen will continue in his full-time faculty roles as investigator and mentor, and as an active contributor to geriatrics research and training at Duke and beyond.
Twenty-three papers or posters were presented by Duke University faculty or students during the annual scientific meeting of the American Geriatrics Society in Portland, OR, May 1-4. Here are the authors, titles, and conclusions (in alphabetical order by first author’s name).

G. T. Buhr, C. Dixon, T. Konrad, C. Luddy, L. Matters, M. Black, M. Yanamadala, L. Previll, L. Shock, J. Visco, D. Wieland, E. McConnell, M. Heflin. Improving Geriatric Primary Care through Interprofessional Teamwork and Practice Improvement Training. Conclusions: we successfully engaged IP teams from primary care practices in training in IPCP and QI. Participants believed that the projects led to improvements in care for older adults and long-term changes in the practices.

E. A. Clark, A. Ogunwale, M. Yanamadala, L. Previll. Quality Improvement Project to Decrease Potentially Inappropriate Medications (PIM) in a Geriatric Primary Care Clinic. Conclusions: There are many challenges in decreasing patients’ exposure to PIMs. Deprescribing PIMs during office visits and having easy access to patient education materials related to PIM usage and alternatives can lead to decreased PIM exposure.

C. Colon-Emeric, J. Huang, C. Pieper, J. Prvu-Bettger, D. Roth, O. Sheehan. Cost Trajectories as a Measure of Functional Resilience after Hospitalization in Older Adults. Conclusions: Cost trajectories are associated with functional recovery following all-cause hospitalization in older adults, offering a potentially useful new outcome in administrative data.

P. P. Cunha, M. Stout, L. Ledbetter, J. Ruhle, H. Whitson, L. Previll. Museum-based Art interventions for people with dementia and their caregivers: A systematic review. Conclusion: Despite the popularity and suggested benefits of museum-based art programs for people with dementia, there is great variability in how programs are delivered and assessed and data on health outcomes are lacking. Future studies with appropriate control groups are needed to determine the impact of museum-based
Faculty and Students Present Research at AGS (continued)

Kahli Zietlow, MD (Geriatrics Advanced Fellow) and Mitchell T. Heflin, MD, MHS (Fellowship Director)

art programs on patient-centered dementia outcomes.


C. Dharmasri, I. Griesemer, L. Arbeeva, L. Campbell, C. Cené, C. Coffman, F. Keefe, E. Oddone, T. Somers, K. Allen. Acceptability of Telephone-Based Pain Coping Skills Training among African Americans with Osteoarthritis. Conclusions: The high ratings of helpfulness demonstrate acceptability of this culturally enhanced pain CST program by African Americans with OA. Increasing access to cognitive-behavioral therapy-based programs may be a promising strategy to mitigate racial disparities in OA-related pain and associated outcomes.


R. Hall, J. Rutledge, A. Luciano, K. Hall, C. Pieper, C. ColonEmeric. Measuring Resilience in Older Dialysis Patients: A Pilot Study. Conclusion In this cohort of older dialysis patients, recovery time, SPPB, and grip strength are feasible and appropriate for measuring resilience.

P. Huynh, M. Hackney, A. Mirk, D. Cruz, A. Miller, S. N. Hastings. Modified Implementation of STRIDE (AssiSted EaRly Mobility for HospitalizeD Older Veterans) at one Veterans Affairs Medical Center. Conclusion: STRIDE implementation without a dedicated walking assistant resulted in eligible patients walking on less than half of eligible days. This may be due to lack of clear roles and responsibilities for staff.

L. Metzger, L. C. Walter, C. Miaskowski, A. K. Smith, A. Hurria, J. Boscardin, H. J. Cohen, V. Lam, C. Ursem, C. M. Blakely, M. A. Gubens, T. M. Jahan, C. E. McCoach, G. M. Allen, J. Rotow, V. Musinipally, M. L. Wong. Life-space decline and resilience during lung cancer treatment in older adults. Conclusions: Clinically significant life-space decline is common among older adults with lung cancer, even those receiving immuno- or targeted therapy. While the majority of patients recovered at 2 months, interventions to increase resilience are needed, particularly among those receiving chemotherapy.

A. Ogunwale, A. Adams, A. Elias, J. Bailey, M. Pepin, K. Schmader, J. Vognsen, C. Colon-Emeric, J. Pavon. FAME: Falls Assessment of Medications in the Elderly Program. Conclusions: The use of fall-related medications is prevalent among older Veterans who are at high fall risk and supports the need for implementation of the Falls Assessment of Medications in the Elderly (FAME) Program.


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D. C. Parker, J. Counts, G. Upchurch, M. Krol, M. Heflin. Evaluation of an Online Community Resource Referral Platform for Older Adults. Conclusions: We identified essential criteria for an online Social Determinants of Health (SDOH) referral platform: local curation of trusted resources; effective and reliable data sharing between health systems and Community Based Organizations (CBOs); community equity/governance of the platform; and upfront incentives for CBO participation.


C. Perfect, L. Wilson, D. Wohl, N. L. Okeke, A. Sangarlangkarn, S. Tolleson-Rinehart. Infectious Diseases Provider Opinions on Care Models for Older Adults Living with HIV. Conclusion: Infectious diseases providers are already thinking about important geriatrics preventive care; however, they also recognize a need for help with geriatric syndromes.

D. M. Schlientz, L. Previll, S. Eucker, C. Vaughan, U. Hwang, S. N. Hastings. Potentially Inappropriate Medications (PIMS) Prescribed in the Emergency Department: EQUIPPED Project Baseline Data. Conclusions: Based on this baseline data, some of the highest yield reductions in PIM prescribing may come from targeting frequently prescribed PIMS (cyclobenzaprine, meclizine, and diazepam); detailing physician assistants/APPs and resident physicians; and advising on appropriate medications to treat back pain, trauma-related pain, and dizziness.

N. Sharda, M. Kuchibhatla, K. Johnson. Characteristics and...
FREQUENTLY ASKED QUESTIONS*
Why Do We Get Slower in Old Age?

“Slow and steady” is the wisdom of age.
– Anonymous

The reaction time of most old people tends to be slower than that of younger people, regardless of the type of reaction that is measured. Simple reaction time (the time between a signal and a motor response) is determined by the condition of the sense organ, the speed of the sensory pathways, and the condition of the muscle.

However, this increase in reaction time is usually only about 13 percent at age 65, which is a small fraction of a second and does not prevent adequate performance in most ordinary activities, such as driving. Furthermore, older people who have long practiced a given skill (such as typing) can maintain their speed most of their lives. Apparently, their years of practice can compensate for slowing reaction times.

Of course, impairment or disabilities can also slow people down at any age.

*Adapted from Palmore, Older Can Be Bolder. Amazon, 2011.

Outcomes of Patients with Dementia who receive Inpatient Palliative Care Consultation. Conclusions: In this study, dementia patients who received IPCC were sicker and more likely to die in the hospital or be discharged to hospice. However, a number of those without IPCC had evidence of advanced disease.


M. A. Stout, J. Davagnino, R. Sloane, N. Ramlal, J. Twersky. Dying at Home: Dispositions for Veterans in the COACH Program at the End of Life. Conclusion: Through participation in the Caring for Older Adults and Caregivers at Home (COACH) program, Veterans with dementia have an increased likelihood of dying at home, regardless of age, race, type of caregiver, dementia level of severity, and length of time in the program.

L. Wilson, M. Gilliam, N. Richmond, K. Mournighan, C. Perfect, G. Buhr. Geriatrics Scholarly Concentration Programs Among U.S. Medical Schools. Conclusions: Among US medical schools, there are very few GSCPs, although existing programs report high student satisfaction. Development of GSCPs may help compensate for limited exposure to geriatrics in the required medical school curriculum for some students.

S. Wong, 1 J. Tu, M. Heflin, S. McDonald, S. Downie, M. Yanamadala. Delirium Education for Patients and Family Caregivers in the Perioperative Setting: A Quality Improvement Initiative. Conclusions: Education on delirium is feasible for family caregivers, most of whom are able to apply the teachings.


Congratulations to all our presenters!
The Bales-Starr Lab is led by Connie Bales, PhD, Professor of Medicine and Senior Fellow in the Aging Center, and Kathryn Starr, PhD, Assistant Professor of Medicine. The laboratory researches the role of nutrition in preventing and managing chronic diseases such as cardiovascular disease. The focus is on how nutritional elements, particularly vitamins and minerals, affect and interact with the aging process. Many of the projects led by the lab are ongoing and include both clinical and epidemiological research that has a strong emphasis on middle-aged and elderly subjects.

Currently, the lab works on projects that discuss the effect of certain diets and exercise on the cardiovascular system and on cognition. Other projects involve weight loss and its effect in improving the overall motor function of participants. Important objectives of the research include informing clinicians whether to suggest weight loss for older obese adults and whether a higher dietary protein intake, combined with a weight loss intervention, will help older obese adults with functional decline to not only attenuate skeletal muscle loss but also improve function.

**ROLES/TASKS**

**Thoma Tucker**

The lab handles a variety of research activities. Senior Research Aide Thoma Tucker recruits participants for each project. Thoma found her way to the lab after a very serious accident. When she got back on her feet, a friend of hers who was working for Dr. Bales at the time recommended her for the recruiting role at the lab. With her background in teaching Science and Math to middle school students and working with charities, she found that her skills and experience were a great match for the position. Her main task is to recruit suitable participants based on inclusion criteria. She schedules the participants’ appointments and guides them throughout the research by constant communication and counsel. Aside from her more conventional tasks, she helps with whatever is necessary at the time—she has even had to make pork sausages by hand for a past pork protein study.

**Amir Hakim**

The Bales-Starr Lab recently gained a new member of the team, Amir Hakim, Clinical Research Coordinator. He ensures that labs, procedures, and tests are performed accurately and according to protocol. He keeps records of all files and folders, maintains IRB eligibility for projects, and plans strategies to meet primary and secondary goals for the projects. In short, his main responsibility is to ensure that assigned studies remain in compliance with all applicable human subjects research rules. Amir graduated from NC State University with a Bachelor’s degree in Human Biology. His coursework, which included a plethora of courses in disciplines such as history, biology, chemistry, and math, prepared him well for his position. In his studies, he focused on clinical research and defining different research methods, often writing research articles and proposals. His experience working in healthcare as a pharmacy technician has also contributed to his expertise in working with the elderly and caring for them. During his first few weeks at the Lab, he has enjoyed learning more about Duke and adapting to the new environment, learning from seasoned nutritional researchers.

Melissa Orenduff

Melissa Orenduff is another key member of the team at the Lab. Melissa, Project Coordinator, is currently a graduate student at the University of North Carolina. She works on analyzing CT scans at the cross section of participants’ thighs from a previous study. These scans reveal differences in muscle mass and fat in the thigh. Melissa uses software that analyzes the tissue based on density and calculations of fat in the tissue. Aside from the scans, Melissa is a managing editor for a journal for which Dr. Bales is a senior editor. Together, Dr. Bales and Melissa have been managing the journal since 2014. She works with the administrative aspects of running the journal and keeps Dr. Bales up to date about the progress with the journal. This involves holding periodic meetings and discussing academic articles and papers.

Melissa went back to school in 2000 to obtain a Bachelor’s degree in Public Health with a concentration in Nutrition. She learned of an open position at Duke working for Dr. Bales, who worked without assistance at the time. After working and supporting Dr. Bales for four years, she decided to spend time with her family and raise her young children. When she felt ready to come back to work, she and Dr. Bales reconnected again when the lab received new funding. She worked as a study coordinator until she returned to school full-time at UNC in 2015. Melissa is fascinated by how food and choices we make in terms of our dietary intake impact us—how it makes us feel and how it makes us prone to

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certain diseases. She is most interested in the biochemical aspect, specifically what happens at a molecular and cellular level. Thus, she decided to return to school to continue her education in the field.

Kenlyn Young
Kenlyn Young, one of two interventionists at the Lab has been a Duke registered dietitian for seven years, conducting research. As a Dietician Clinician from Duke Behavioral Medicine, she has been with the lab for two years now. Kenlyn mainly works with elderly veterans at the Veteran Affairs Medical Center (VA) who are due for surgery and are at risk for malnutrition, with guidance from Dr. Starr. Since work in the VA tends to be more clinical, much of her work involves working directly with the participants from two weeks before surgery to four weeks after surgery—this long-term relationship building is one of the most exciting aspects of job according to Kenlyn. She spends time with patients in the VA Perioperative Optimization of Senior Health (POSH) clinic, reviewing their medical history to see if they qualify for the study. In addition, Kenlyn conducts a series of tests, including function, cognition, nutrition/physical exams to assess the participants and to categorize them into either the control group or the treatment (high protein intake) group. She has found that increasing protein in veterans’ diets helps veterans and the elderly to recover more quickly post-surgery.

Kenlyn met Dr. Bales through a dietetic internship, as a volunteer, but over the last 10 years, she has witnessed the team expand in terms of its size and research efforts. She finds that her work with veterans, whom she describes as kind and extremely grateful, is especially rewarding, “You walk over to VA and you just smile—it brings people joy.”

Jamie Rinker
Jamie Rinker, another interventionist Dietician Clinician, has experience in research and development from Drexel University where her focus on graduate assistant research work, involving bottle-feeding infants and helping with food safety in homes, compelled her to continue nutrition and dietary research. When she found the Center’s nutrition lab, she was excited to join a team that does research to improve people’s diet and ultimately their lives.

Jamie saw that the work at the lab focuses on helping patients receive appropriate care, starting with nutrition. Her ongoing work has involved analyzing protein levels within a healthy diet. She has been focusing on weight loss and weight maintenance. She surveys her participants, who are usually 60 and older, on mental state and quality of life factors. Jamie says that working with this elderly population is rewarding because the population is so unique, and there is not much funding for research dedicated to people 60 and older.

SUCCESSES AND IMPACT
Thoma says that one of the most successful elements of the Lab is the staff’s teamwork despite the diversity of work the staff does every day. She says, “[they] all have different roles to play but at the end [they] come together as a team.” Thoma attributes this quality to Drs. Bales and Starr, who have fostered a supportive and positive work environment for all lab employees. Thoma truly enjoys recruiting for the studies and working with the participants because each member of the team is “so entrenched in helping other people and making a difference.”

In the first few weeks that Amir has been at the lab, he has seen the significance and value of the research for older adults. Research results provide valuable information that can be the basis for deeper understanding of the effect of nutrition on the overall health and well-being of humans. He finds it intriguing that changes to one’s diet can have such a profound impact on one’s life.

During her time at the lab, Kenlyn has seen the incredible results of eating a better, high quality protein diet. She found that eating right after surgery and eating the right foods is crucial to recovery that is faster and is accompanied by fewer complications. Generally, protein reduces hospital readmission rates. Kenlyn enjoys working with veterans, a “special and kind population”, and being a presence in their lives. It is these interactions and the genuine appreciation of her work that she finds particularly rewarding.

CHALLENGES
As a relative newcomer to human subjects research, Amir says that it is difficult to keep up with the work that needs to be completed, finding time to attend all of the meetings, and finish the training he must complete before consenting patients. He says that finding time and scheduling all these tasks can be challenging at times.

Some of Kenlyn’s challenges as an interventionist working with the VA are that surgeries can be cancelled, affecting data collection and causing unexpected shifts in schedules. She also finds that it a challenge to find participants who qualify for the study.

Jamie says that the challenges are her rewards because she recognizes that helping others is a difficult task. Though

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it is hard not to be disappointed when the diets she prescribes do not have the effect she predicted, she continues to work to help participants balance their diets. Jamie supports her participants and helps them to find small elements of their lives that they can control.

The Center Report 9 Summer 2019

FEATURED STAFF: Bales-Starr Laboratory (continued)

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FUTURE

The lab is collaborating with different departments and principal investigators to conduct various research studies that are not just nutrition-based, but can also examine the effect of nutrition on different bodily functions such as motor movement and balance. The lab will also expand its research to vegetarian sources of protein. The team hopes that research will help physicians speak to clinical patients, informing the medical community with accurate and meaningful nutrition advice.

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As Plaque Deposits Increase in the Aging Brain, Money Management Falters

Many aging adults may show signs of slowing when it comes to managing their finances, such as calculating their change when they pay cash or balancing an account ledger. These changes happen even in adults who are cognitively healthy. But trouble managing money can also be a harbinger of dementia and according to new Duke research in May 2019 issue of The Journal of Prevention of Alzheimer's Disease, may be correlated with amount of beta-amyloid protein deposits built up in the brain.

“There has been a misperception that financial difficulty may occur only in the later stages of dementia, but this can happen early and the changes can be subtle,” said P. Murali Doraiswamy, a professor of psychiatry at Duke and senior author of the paper. “The more we can understand adults’ financial decision-making capacity and how that may change with aging, the better we can inform society about those issues.”

The findings are based on 243 adults ages 55 to 90 participating in a longitudinal study, at over 60 sites in the US and Canada, called the Alzheimer’s Disease Neuroimaging Initiative, which included tests of their financial skills and $18F-florbetapir brain PET scans to reveal protein buildup of beta-amyloid plaques, in their brains. Financial ability in domains such as monetary calculation, financial concepts, and bank statement usage was assessed using a new test called the Financial Capacity Instrument-Short Form which takes about 20 minutes to complete.

Even cognitively healthy people can develop protein plaques as they age, but the plaques may appear years earlier and be more widespread in those at risk for Alzheimer’s disease due to a family history or mild memory impairment, Doraiswamy said.

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Most testing for early dementia and Alzheimer’s disease focuses on memory, said Duke Psychiatry researcher Sierra Tolbert, the study’s lead author. A financial capacity test could also be a tool doctors could use to track a person’s cognitive functioning over time and is sensitive enough to detect even subtle changes, she said.

“Doctors could consider proactively counseling their patients using this scale, but it’s not widely in use,” Tolbert said. “If someone’s scores are declining, that could be a warning sign. We’re hoping with this research more doctors will become aware there are tools that can measure subtle changes over time and possibly help patients and families protect their loved ones and their finances.”

In addition to Doraiswamy and Tolbert, study authors include Yuhan Liu, Caroline Hellegers, Jeffrey R. Petrella, Michael W. Weiner and Terence Z. Wong.

This research used data from the Alzheimer’s Disease Neuroimaging Initiative, which is funded by the National Institutes of Health (U01 AG024904) and the U.S. Department of Defense (W81XWH-12–2–0012), as well as the National Institute on Aging, the National Institute of Biomedical Imaging and Bioengineering, and through contributions from numerous other organizations.
COMING EVENTS

July 14-18, 2019: Alzheimer’s Association International Conference in Los Angeles, CA, Convention Center. Contact: alz.org/AAIC.


November 13-17, 2019: Annual Scientific Meeting of the Gerontological Society (including AGHE meeting). Austin, TX. Contact: Membership@geron.org.

December 6, 2019: The Center for the Study of Aging 4th Annual Research and Education Retreat, 12:00 to 5:00 PM in the Trent Semans Great Hall, Lower Level. Contact: 919-660-7502.