ADVANCING INNOVATION FOR AGING

Welcome to PennAITech

We are welcoming you to our sixth newsletter of the Penn Artificial Intelligence and Technology Collaboratory for Healthy Aging (PennAITech). PennAITech, funded by the National Institute on Aging, is committed to developing, evaluating, commercializing, and disseminating innovative technology and artificial intelligence systems to support older adults and those with Alzheimer's Disease and Related Dementias. Our Year 2 pilot awardees have been announced and you can read more about them in this issue. We are looking forward to working with this group of innovators who are working on significant issues related to aging and ways to harness the potential of technology and artificial intelligence to improve the lives of older adults and their families and persons with dementia. Our Year 3 pilot award competition is under way; we have completed two phases and are now working with finalists to submit their final packages.

We continue facilitating sessions with various stakeholder groups providing an opportunity for our pilot awardees to receive valuable feedback from diverse stakeholder groups (including clinicians, older adults and family members) that can inform the redesign, implementation and evaluation of their tools. In early December we held a two-day workshop exploring the potential of Generative AI and Large Language Models (LLMs) in gerontology. We invited a group of national experts in computer science, gerontology, policy, ethics and law to discuss both opportunities and challenges with the significant growth of LLMs to address aging. The goal of this group is to disseminate key recommendations in a white paper.

Our webinar series for 2023-2024 was launched in September; all recorded sessions will be available on our YouTube channel. In this issue we feature Dr. Cacchione and Dr. Walke. We also learn more about AutoTune Me and University of Colorado/ Kaiser Permanente. We provide updates from the field and latest news. As always, we invite you to follow our social media platforms, including our YouTube channel and reach out with any questions or suggestions.

George Demiris

Meet the Team

Principal Investigators

George Demiris, PhD, FACMI

Jason Karlawish, MD

Jason H. Moore, PhD, FACMI

Aging Focus Pilot Core

Kathryn H. Bowles PhD, FACMI, FAAN

Pamela Z. Cacchione, PhD, CRNP, FAAN

AD/ADRD Focus Pilot Core

Lauren Massimo PhD, CRNP

Dawn Mechanic-Hamilton, PhD

The overarching goal of the Aging Focus Pilot Core is to promote the advancement of science using technology and artificial intelligence to optimize quality of life and healthcare management for older adults living in their homes independently, as well as those receiving skilled home and community-based services. This Core solicits, selects, and manages pilot studies that develop or test AI and technology applications to detect risks, predict needs, address disparities, improve access to care, and support decision making for chronic illness management and safe aging in place.

The overarching goal of the Alzheimer's Disease and Alzheimer's Disease Related Dementias (AD/ADRD) Focus Pilot Core is to promote the advancement of science and engineering for predictive analytics, clinical decision support, or the care of adults with AD/ADRD. This Core solicits, reviews, and supports pilot studies that develop or advance the use of AI and technology for AD/ADRD predictive analytics, clinical decision support, or the care of adults with AD/ADRD.

Meet the Supporting Core Team

Networking and Mentoring Core

The overarching goal of the Networking and Mentoring Core is to support activities intended to facilitate networking and mentoring for the awardees of the Aging and AD pilot projects, all of whom are invested in Artificial Intelligence (AI) approaches and technology for aging adults, including those with Alzheimer's disease or related dementias (AD/ADRD).
This Core organizes and supports consortium networking activities and communicates with the broader scientific community.

Marylyn D. Ritchie, PhD

Roy Rosin

Technology Identification and Training Core

Li Shen, PhD, FAIMBE

Ryan Urbanowicz, PhD

The overarching goal of the Technology Identification and Training Core is to use evidence from the literature, stakeholder and expert inputs to identify the technology needs of older Americans, as well as develop training activities for artificial intelligence (AI) and technology for scientists, engineers, clinicians, medical professionals, patients, policy makers, and investors.

Ethics and Policy Core

The overarching goal of the Ethics and Policy Core is to shift the current ethics and policy paradigm by focusing on issues that arise at the intersection of aging and of AI methods and technologies for healthy aging. The Core will work in close collaboration with the other PennAITech Collaboratory Cores to address four key issues: (1) promoting the autonomy of older adults by balancing considerations of usefulness and intrusiveness; (2) protecting older adults in light of vulnerability due to cognitive and functional decline; (3) mitigating bias and addressing health disparities, such as racial disparities and urban-rural disparities; and (4) safeguarding the data privacy of older adults.

Emily Largent, JD, PhD, RN

Anna Wexler, PhD

Clinical Translation and Validation Core

The goal of the Clinical Translation and Validation Core is to use the science and practice of geriatrics and gerontology to assess the feasibility and clinical utility of artificial intelligence (AI) methods for clinical decision support and of new technology for monitoring aging adults in their home. This Core provides an expert panel to assess the feasibility and clinical value of new artificial intelligence models for predictive analytics and clinical decision support and of new technologies designed to monitor aging adults and those with AD/ADRD. It provides a testbed for new technologies designed to monitor aging adults and those with AD/ADRD with an emphasis on underserved and rural populations.

Jason Karlawish, MD

Rebecca T. Brown, MD, MPH

Stakeholder Engagement Core

The overarching goal of the Stakeholder Engagement Core (SEC) is to ensure that technology solutions and AI approaches proposed and developed by the PennAITech Collaboratory are maximally adoptable by and accessible to their end users by soliciting ongoing stakeholder input and involving all key parties throughout all phases of the development and testing processes. The Core maintains a technology consortium (consisting of technology companies, startups, venture capital firms, and angel investors) that provide guidance and collaboration opportunities for pilot projects and a platform for potential dissemination and commercialization of innovative tools.

George Demiris, PhD, FACMI

Lisa M. Walke, MD, MSHA

Internal Advisory Board (IAB)

John Holmes, PhD, FACE, FACMI

The Internal Advisory Board (IAB) plays an important role in providing perspective and detailed advice and recommendations to the leadership team and the core directors. The IAB is chaired by Dr. John Holmes who is a Professor of Informatics and Epidemiology with significant experience in artificial intelligence and clinical decision support. We have assembled a team of local Penn experts representing three key areas of expertise. The first area, Biomedical Informatics and Artificial Intelligence, includes Drs. John Holmes (Professor of Informatics, AI expert), Ross Koppel (Professor of Sociology, EHR expert), Konrad Kording (Professor of Computer Science and Neuroscience, AI expert), Insup Lee (Professor of Computer Science and Engineering) and Danielle Mowery (Chief Research Information Officer). The second area, Geriatrics and Medicine, includes Drs. Mark Neuman (Anesthesiologist specializing in older adults), Matt Press (Medical Director of Primary Care), and Ramy Sedhom (Palliative Care, Geriatric Oncology, Penn Medicine Princeton Health). The third area, Home Care, includes Danielle Flynn (Director, Penn Medicine Home Health), Nancy Hodgson (Professor of Nursing), Bruce Kinosian (Division of Geriatrics), and Brian Litt (Director, Penn Center for Health, Devices, and Technology).

TEAM MEMBER SPOTLIGHT:

Pamela Z. Cacchione, PhD, CRNP, FAAN

Ralston House Term Chair in Gerontological Nursing
Professor of Geropsychiatric Nursing
Nurse Scientist, Penn Presbyterian Medical Center
University of Pennsylvania School of Nursing
Secondary Faculty GRASP Research Lab, SEAS
Senior Fellow Leonard Davis Institute of Healthcare Economics

Tell us about your research interests. Describe some of your research projects.

My research interest started in developing interventions for sensory impaired older adults with which I developed a nice skill set for human factors and designing technologies for older adults. I have been working closely with the School of Engineering and Applied Sciences for several years now testing and deploying assistive robots in older adult communities. We have completed two robotic studies at one of our local Programs of All-Inclusive Care for the Elderly Centers. And are about to embark on a third. The first two were testing Relay an assistive robot in encouraging hydration, ambulation and a reach task. The second we deployed and tested Quori a robot created here at the University of Pennsylvania. COVID disrupted this study. However, we were able to test Quori as a COVID screener. Most recently I am working with Recoupero Robotics on an STTR to improve stroke outcomes in persons with chronic stroke. At this point we are testing for safety in a real-world setting. I just completed data collection on a PARO study, the social assistive robotic seal out of Japan. We were testing to see if PARO would decrease medication usage, 1:1 sitter usage and length of stay in hospitalized persons with dementia and or delirium. As a Nurse Scientist at Penn Presbyterian Medical Center (PPMC), I facilitate research and translational research and dissemination by nurses. Some of the projects I have worked on at PPMC include a multimodal intervention to decrease violence and aggression in the Emergency Department; a qualitative study on symptom experience in persons with Mesothelioma; a sepsis escape room; a survey on burnout and perceived stress following COVID; and a qualitative study of nurses' experiences during COVID. I also have a penchant for creating things. I built a UV light box so I could clean the PARO robots, I have been prototyping Heart failure monitoring socks; and worked on a Smart Walker to name a few.

What is your role within PennAITech?

I am the Co-Lead of the Healthy Aging Core with Dr. Kathy Bowles. We have the distinct pleasure of reading the first and second round of applications along with a cadre of other experts. We meet quarterly with the awardees to help facilitate their progress. We meet with potential awardees about their projects. I am really enjoying this role! There are a lot of very creative people out there trying to solve problems for older adults.

What do you see as the role of artificial intelligence and technology in biomedicine and health care in the next few years?

I am very excited about the possibilities of AI and technology in healthcare. My hope is that AI and technology can accelerate meaningful solutions for older adults to facilitate healthy aging and continued living in the community. Basically, prolonging illness and disability free days. Or providing meaningful adaptations for illness and disability in older adults. The next few years should be very exciting as we try to harness the advances of AI and technology to improve the lives of older adults.

What advice do you have for innovators and entrepreneurs who are embarking on works harnessing the potential of AI or other technologies for aging?

My best advice for entrepreneurs is to find a real problem to solve and not have a solution seeking a problem. This really means talking with older adults and their caregivers, talking with providers to determine the pain points. Human-centered design will improve the probability of success. The most exciting part of creating is to determine if there is a problem that needs solving and how could AI or technologies help address a human-centered problem. For non health entrepreneurs I highly recommend you partner with older adults, nurses, providers or rehabilitation therapists.

TEAM MEMBER SPOTLIGHT:

Lisa M. Walke, MD, MSHA, AGSF

William Maul Measey –Truman G. Schnabel, Jr., M.D.
Associate Professor of Geriatric Medicine and Gerontology
Chief, Division of Geriatric Medicine
University of Pennsylvania Perelman School of Medicine

Tell us about your research interests.
Describe some of your research projects.

My research interest is Implementation science in geriatric medicine with a focus on innovative educational and care delivery models that improve health outcomes for older adults. I have a particular interest in improving health outcomes for older surgical patients; I have been looking at factors associated with improved outcomes. I am only PI on a project funded by the CDC to improve adult vaccination rates. We are focusing on optimizing our current delivery model for vaccination and implementing new strategies.

What is your role within PennAITech?

I am the co-leader of the Stakeholder Engagement Core (SEC). The goal of the SEC is to ensure the AI strategies and technology solutions proposed by our Collaboratory are deemed feasible and desirable by the older adults, care partners and/or clinicians for whom they are designed.

What do you see as the role of artificial intelligence and technology in biomedicine and health care in the next few years?

I believe artificial intelligence and technology will become even more integrated in biomedicine and health care in the near future, especially in regards to older adults. As a geriatrician, I am very excited by the possibility that technologies developed today may lead to a paradigm shift in the health and well being of numerous older adults, and their extended networks, in a matter of years.

What advice do you have for innovators and entrepreneurs who are embarking on works harnessing the potential of AI or other technologies for aging?

There is still so much that can be done in the field of aging. Your ideas, designs and enthusiasm have the potential to transform lives. Don't give up!

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Artificial Intelligence and Technology Collaboratory for Healthy Aging

INTRODUCING OUR 2023-2024 PILOT AWARDEES

Gary Weissman
Advancing Diagnostic Excellence for Older Adults through Collective Intelligence and Imitation Learning
University of Pennsylvania

Maria Valero
GlucoCheck: A Non-invasive & AI-assisted Blood Glucose Monitoring Device for Older Adults
Kennesaw State University

Tony C Carnes
Real-time remote monitoring of confirmed medication adherence
etectRx

Maryam Zolnoori
A speech-processing algorithm for automatic screening of African American patients with mild cognitive impairment and early dementia in home health settings
Columbia University Medical Center and VNS Health

Jane Chung
A Device Free WiFi Sensing System to Assess Daily Activities and Mobility in Low-Income Older Adults with and without Cognitive Impairment
Virginia Commonwealth University

Xinyu Zhang
Non-Intrusive, Fine-Grained In-Home Daily Activity Transcription for Alzheimer's Monitoring
University of California San Diego

Aidong Zhang
Fairness and Robust Interpretability of Prediction Approaches for Aging and Alzheimer's Disease
University of Virginia

Clara Berridge
Talking tech with dementia care dyads: Improving a self-administered tool to support informed decision
University of Washington

Sandeep Patil
Prevention of Patch Poisoning in Elderly Alzheimer's Patients
Vaaji LLC

Julie Faieta
Health App Review Tool: Connecting those Affected by Alzheimer's to Needed Technology Support
University of Pittsburgh

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Technology Collaboratory
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CLICK HERE TO LEARN MORE ABOUT OUR 2022-2023 PILOT AWARDEES

Desh Mohan
Patient-Surrogate Alignment in Digital Advance Care Planning
Koda Health

Robin Austin
Designing Usable Technologies via Data-Driven Whole-Person User Personas
University of Minnesota

Richard Everts
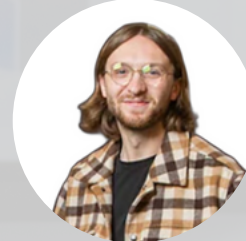RGBd + Thermal Computer Vision Platform for Home Monitoring and Telehealth
Bestie Bot

Robin Brewer
Conversational Care Technologies
University of Michigan

David Yonce
Physiological Detection and Monitoring of Alzheimer's Disease
Cogwear

David Stout
AI-Assisted Fall Detection and Remote Monitoring for Seniors with ADRD
Iris Technology Inc

Lorens Helmchen
AI-Enabled Conversations to Manage Psychotropic Medication
The George Washington University

Veerawat Phongtankuel
Detecting respiratory distress in patients with advanced ADRD
Weill Cornell Medicine

Emma Rhodes
Feasibility of Digital Monitoring to Detect Autonomic Markers of Empathy Loss in bv FTD
University of Pennsylvania

Maja Mataric
An Accessible Machine Learning-based ADRD Screening Tool for Caregivers
University of South California

Kendra Ray
A Music-Based Mobile App to Combat Neuropsychiatric Symptoms in People Living With ADRD
AutoTune Me

Jennifer Portz
Leveraging Patient Portals to Support Caregivers
University of Colorado/ Kaiser Permanente

PILOT IN THE SPOTLIGHT:

A Music-Based Mobile App to Combat Neuropsychiatric Symptoms in People Living With ADRD

Kendra Ray, PhD, MPH, MT-BC
CEO and Founder of Autotune Me, LLC

TELL US ABOUT YOUR PROJECT AND WHAT YOU PLAN TO DO THIS NEXT YEAR.

At Autotune Me, we are aiming to help relieve symptoms of dementia and caregiver burden through a music-based mobile app designed with machine learning of physiological measures that are monitored on a smartwatch and delivered through a phone or Bluetooth speaker.

Our app, TuneMind, will offer an easy solution for patients to benefit from remote monitoring combined with automated, tailored, music-based interventions. A caregiver will not need to oversee the mobile application, as it will automatically deliver personalized music to help reduce common symptoms of dementia like agitation. The machine learning features will deliver person-preferred music when needed, with the correct dose of music required to be effective.

To date, our team has developed a prototype of TuneMind. Over the coming month, it will be evaluated by stakeholders, e.g., social workers and other care professionals. Next year, we will conduct a usability study with community-dwelling people with dementia and their caregivers. These individuals will have an opportunity to use the app for two weeks. We will lean on their feedback to help our team determine any adjustments needed before the completion of the final version of TuneMind.

WHAT ARE THE LONG TERM GOALS FOR YOUR RESEARCH?

On completing the development of our prototype, TuneMind, and usability study, our team plans to perform a more extensive investigation to determine the feasibility and acceptability of using our music-based mobile application in community settings and long-term care facilities. Ultimately, we aim to bring TuneMind to market, making it available to anyone seeking an evidence-based, nonpharmacological method to reduce anxiety or agitation. Before this, a few steps need to occur. We are a diverse team both in terms of profession and culture; we are interested in pursuing opportunities that focus on bringing our mobile application into underserved communities where older adults are at risk for health disparities, have less access to treatments, or have limited resources to cope with symptoms of Alzheimer's disease or related dementia. Towards the end of next year, we will apply for non-dilutive funding opportunities such as the Small Business Innovation Research grant through the National Institute on Aging.

HOW DO YOU ENVISION THE ROLE OF AI AND TECHNOLOGIES IN SUPPORTING AGING?

As baby boomers age and the prevalence of Alzheimer's disease and related dementia increases, so does the need for AI and technologies to provide methods to aid patients in coping with symptoms of dementia and caregiver burden. Particularly in long-term care settings, we are witnessing technology that can reduce common occurrences like falls and agitation while improving quality of life, which is in dire need. The development of mobile apps that use or enhance nonpharmacological treatments (e.g., music or other creative arts therapies) would significantly improve the quality of life for the residents by offering stimulating activities and aiding in self-expression.

Technologies that use sensors will assist in preventing falls or eliminating wandering, and other unsafe activities will enhance the quality of care that facilities can provide. Developers in AI must seize the opportunity to deliver apps that will help reduce stress, provide respite, and offer relief for both paid and family caregivers. From my perspective, AI can positively change how people approach caregiving in community settings and long-term care.
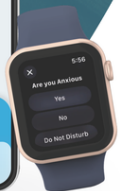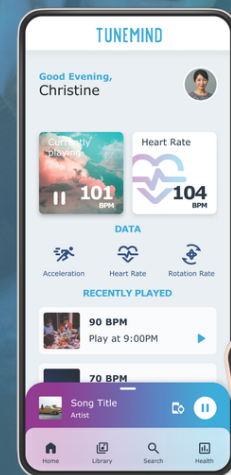
PILOT IN THE SPOTLIGHT:

Leveraging Patient Portals to Support Caregivers

Jennifer Portz, PhD, MSW

Assistant Professor,
University of Colorado School of Medicine
Affiliate Investigator, Institute for Health Research,
Kaiser Permanente Colorado

TELL US ABOUT YOUR PROJECT AND WHAT YOU PLAN TO DO THIS NEXT YEAR.

The objective of our pilot is to develop a data framework for finding caregivers of people living with dementia from the electronic health record (EHR) who can benefit from caregiver and dyadic interventions. Our previous work found that health outcomes, such as hospitalization, for caregiver-PLWD dyads living in the same household are linked. However, our current model is limited to caregivers living in the same household, often spouses, who share health insurance. During our project, we will use natural language processing to fill this gap by analyzing unstructured EHR data to find patterns among caregivers that will allow us to further identify non-traditional caregivers (e.g., friends, neighbors) and caregivers outside the home (e.g., adult children, extended family members).

WHAT ARE THE LONG TERM GOALS FOR YOUR RESEARCH?

Our overall goal is to improve intervention delivery for caregivers of people living with dementia (PLWD) and study the bi-directional effects on health outcomes for both PLWD and their caregivers.

HOW DO YOU ENVISION THE ROLE OF AI AND TECHNOLOGIES IN SUPPORTING AGING?

Caregiver-specific interventions are beneficial for improving mental health, confidence in caregiving, and self-care. However, caregivers often experience barriers to such interventions such as time and access. By automating the process of caregiver identification through the EHR, interventions can be more easily delivered to engage and support the caregiver.

a2 COLLECTIVE PRESENTS

a2 NATIONAL SYMPOSIUM

Empowering Innovation in AI/Tech + Aging

MARCH 19-20, 2024

UNIVERSITY OF PENNSYLVANIA | PHILADELPHIA, PA

HOSTED BY:

PennAITech

CO-HOSTED BY:

JOHNS HOPKINS AI & TECHNOLOGY COLLABORATORY *for* AGING RESEARCH

MassAITC

a2 COLLECTIVE COORDINATING CENTER

The a2 Collective National Symposium is primarily funded by the National Institute on Aging, part of the National Institutes of Health.

As technology continues to evolve and shape the future of healthcare, **the a2 Collective invites innovators, academics, and industry leaders to convene at the University of Pennsylvania's Smilow Center for Translational Research on March 19-20, 2024.** Backed by the National Institute on Aging, this 2-day event is bound to spark dialogue, foster collaboration, and ignite the next wave of transformative ideas in AgeTech, AI, healthy aging, and Alzheimer's disease and related dementias (AD/ADRD).

WHY ATTEND?

This symposium isn't your standard tech event. With a special focus on AI and AgeTech, we're addressing challenges and celebrating innovations to improve care and health outcomes for our aging population. Engage with awardees from both the first and second a2PilotAwards.ai cohorts, executives from the healthcare industry, capital allocators, renowned academic experts, clinical researchers, and a host of tech startups ready to shape the future of healthtech. If you're an investor, this is your prime opportunity to meet game-changing startups in the AI, AgeTech, and AD/ADRD space.

Register now: www.pennaitech.org/symposium

KEYNOTES FROM LEADING INNOVATORS INCLUDE

Dr. Suchi Saria: As co-director of the Aging Pilot Core at JH AITC and the founder and CEO of Bayesian Health, whose AI-driven platform for physicians was selected by TIME as a best invention of 2023, Dr. Saria is no stranger to the intersection of AI and healthcare. Her dedication to personalizing healthcare decisions through AI is both impressive and inspiring. Her awards, including the World Economic Forum's Young Global Leader and MIT Technology Review's 35 Innovators Under 35, are a testament to her groundbreaking work in the field.

Dr. Joel Dudley: Holding a partnership at Innovation Endeavors and having co-founded companies focused on leveraging AI in healthcare, Dr. Dudley offers a wealth of knowledge and experience. With a doctorate in biomedical informatics from Stanford University, his contributions to AI in healthcare are both prolific and impactful.

Andrew Toy: As the CEO of Clover Health (Nasdaq: CLOV), Toy is at the helm of a technology-first Medicare company aiming to revolutionize senior healthcare. With a past tenure at Google leading AI/ML development for the Google Cloud and Android for Work, his insights on the role of machine learning in healthcare are indispensable. Andrew holds a BS and MS in Computer Science from Stanford University.

EVENT HIGHLIGHTS

- Awardee Pitch Competition: Take in innovative project pitches from a2 Pilot Awardees who are aiming to redefine healthtech for the aging population.
- Awardee Poster Presentations: Delve further into a2 Pilot Awardees' projects with an opportunity for one-on-one engagement and deeper understanding.
- Panel Discussions: Engage in enriching discussions on AgeTech funding and entrepreneurship, generative AI and aging, and stakeholders' lived experience.

We look forward to welcoming you to Philadelphia in March 2024!

Register now: www.pennaitech.org/symposium

NEWS FROM THE FIELD

WHAT'S HAPPENING IN AI?

Healthcare systems to join White House plan to control AI risks
Twenty-eight healthcare companies are signing U.S. President Joe Biden's voluntary commitments aimed at ensuring the safe development of artificial intelligence. The commitments by healthcare providers and payers follow those of 15 leading AI companies, including Google and OpenAI to develop AI models responsibly. Read more about it here:

https://www.reuters.com/world/us/healthcare-providers-join-us-plan-manage-ai-risks-white-house-2023-12-14/

New AI models for health care by Google
Google unveiled MedLM, a collection of novel artificial intelligence models specifically tailored for the healthcare sector. These models are intended to assist clinicians and researchers in conducting intricate studies, summarizing doctor-patient interactions, and more. This strategic move by Google represents its latest endeavor to capitalize on artificial intelligence tools within the healthcare industry, where intense competition for market share persists, with rivals such as Amazon and Microsoft. The MedLM suite comprises both a large and a medium-sized AI model, both of which are built on Med-PaLM 2—a substantial language model trained on medical data that Google initially announced in March. More info here:

https://www.cnbc.com/2023/12/13/how-doctors-are-using-googles-new-ai-models-for-health-care.html

AMA survey provides insight into physicians' attitudes towards AI in healthcare
A recent survey released by the American Medical Association (AMA) reveals that healthcare practitioners express both enthusiasm and caution regarding augmented intelligence, commonly referred to as artificial intelligence (AI), in the healthcare sector.
The study sheds light on the sentiments of physicians concerning various aspects of health AI, encompassing opportunities, reservations, motivations, prerequisites, and potential applications.
AMA President Jesse M. Ehrenfeld, MD, MPH, pointed out: "Physicians are optimistic about the advantages that properly designed AI-enabled tools can have for patient care, and nearly two-thirds of physicians see an advantage to AI if key requirements are met. The AMA survey illustrates that physicians' greatest hope for AI rests in reducing the crushing administrative burdens that plague modern medicine, which drain health care resources and pull physicians away from patient care."
Full report of the survey can be found here:

https://www.ama-assn.org/system/files/physician-ai-sentiment-report.pdf

ONC rule addresses AI transparency in health care
The Office of the National Coordinator for Health Information Technology within the HHS recently finalized an extensive rule on Wednesday with the goal of enhancing data interoperability and patient access. One notable provision in the rule focuses on introducing transparency requirements for artificial intelligence embedded in health software.
According to the finalized rule, developers of clinical decision support and predictive tools certified by the ONC must facilitate access to a specific group of identified users. This access encompasses information such as the intervention's value, proper usage guidelines, known risks or inappropriate applications, and details regarding how the tool is maintained and updated. These requirements are slated to become effective by the conclusion of the next year. Additionally, the final regulation encompasses various updates and exceptions related to information blocking.
The final rule can be found here: https://www.healthit.gov/sites/default/files/page/2023-12/hti-1-final-rule.pdf

SELECTED PUBLICATIONS

WORK BY OUR TEAM

01.

Digital markers of motor speech impairments in spontaneous speech of patients with ALS-FTD spectrum disorders.
Shellikeri S, Cho S, Ash S, Gonzalez-Recober C, Mcmillan CT, Elman L, Quinn C, Amado DA, Baer M, Irwin DJ, **Massimo L**, Olm CA, Liberman MY, Grossman M, Nevler N. Amyotroph Lateral Scler Frontotemporal Degener. 2023 Dec 5:1-9. doi: 10.1080/21678421.2023.2288106. Online ahead of print. PMID: 38050971

02.

"A Raw Blessing" - Caregivers' Experiences Providing Care to Persons Living with Dementia in the COVID-19 Pandemic.
Largent EA, Peterson A, Harkins K, Coykendall C, Kleid M, Abera M, Stites SD, **Karlawish J**, Clapp JT. J Law Med Ethics. 2023;51(3):626-640. doi: 10.1017/jme.2023.99. Epub 2023 Dec 13. PMID: 38088630

03.

Discrepancies in Patient and Caregiver Ratings of Personality Change in Alzheimer's Disease and Related Dementias.
Rhodes E, **Mechanic-Hamilton D**, Phillips JS, Bahena A, Vitali N, Hlava Q, Cook P, Gee J, Grossman M, McMillan C, **Massimo L**. Arch Clin Neuropsychol. 2023 Oct 20:acad079. doi: 10.1093/arclin/acad079. Online ahead of print. PMID: 37867324

04.

Smart Speaker and ICT Use in Relationship with Social Connectedness During the Pandemic: Loneliness and Social Isolation Found in Older Adults in Low-Income Housing.
Chung J, Gendron T, Winship J, Wood RE, Mansion N, Parsons P, **Demiris G**. Gerontologist. 2023 Oct 25:gnad145. doi: 10.1093/geront/gnad145. Online ahead of print.PMID: 37880825

05.

Aliro: an automated machine learning tool leveraging large language models.
Choi H, Moran J, Matsumoto N, Hernandez ME, **Moore JH**. Bioinformatics. 2023 Oct 3;39(10):btad606. doi: 10.1093/bioinformatics/btad606. PMID: 37796839

06.

Mortality Among Older Medical Patients at Flagship Hospitals and Their Affiliates.
Jain S, Rosenbaum PR, Reiter JG, Ramadan OI, Hill AS, Hashemi S, **Brown RT**, Kelz RR, Fleisher LA, Silber JH. J Gen Intern Med. 2023 Dec 12. doi: 10.1007/s11606-023-08415-w. Online ahead of print. PMID: 38087179

PUBLICATIONS

07.

Sex modifies effects of imaging and CSF biomarkers on cognitive and functional outcomes: a study of Alzheimer's disease.
Lee BN, Wang J, Hall MA, Kim D, Stites SD, **Shen L**; Alzheimer's Disease Neuroimaging Initiative. Neurobiol Aging. 2024 Jan;133:67-77. doi: 10.1016/j.neurobiolaging.2023.10.002. Epub 2023 Oct 20. PMID: 37913627

08.

Utilizing patient-nurse verbal communication in building risk identification models: the missing critical data stream in home healthcare.
Zolnoori M, Sridharan S, Zolnour A, Vergez S, McDonald MV, Kostic Z, **Bowles KH**, Topaz M. J Am Med Inform Assoc. 2023 Oct 17:ocad195. doi: 10.1093/jamia/ocad195. Online ahead of print. PMID: 37847651

09.

Monoclonal anti-amyloid antibodies for the treatment of Alzheimer's disease and the hesitant geriatrician.
Chin NA, Widera E, Brangman SA, **Karlawish J**. J Am Geriatr Soc. 2023 Nov 1. doi: 10.1111/jgs.18652. Online ahead of print. PMID: 37909226

10.

Cross-phenotype associations between Alzheimer's Disease and its comorbidities may provide clues to progression.
Moore A, **Ritchie MD**. medRxiv. 2023 Nov 7:2023.11.06.23297993. doi: 10.1101/2023.11.06.23297993. Preprint. PMID: 37986758

11.

Policies of US Companies Offering Direct-to-Consumer Laboratory Tests.
Kalokairinou L, Choi R, Wei NY, **Wexler A**. JAMA Intern Med. 2023 Nov 1;183(11):1275-1278. doi: 10.1001/jamainternmed.2023.4726. PMID: 37721771

12.

Epigenetic age and socioeconomic status contribute to racial disparities in cognitive and functional aging between Black and White older Americans.
Yannatos I, Stites SD, Boen C, Xie SX, **Brown RT**, McMillan CT. medRxiv. 2023 Oct 2:2023.09.29.23296351. doi: 10.1101/2023.09.29.23296351. Preprint. PMID: 37873230

13.

Development of a Lived Experience Panel to inform the design of embedded pragmatic trials of dementia care interventions.
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