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h-index: 22 | **i10-index:** 41
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1.0. PROFESSIONAL STATEMENT

My research develops and applies quantitative frameworks to model the complex dynamics of health and disease in aging populations, with a primary focus on Alzheimer's disease and related dementias. I integrate large-scale administrative claims (including Medicare data), nationally representative longitudinal surveys, and clinical datasets to examine disease onset, progression, and mortality as interconnected processes, with an emphasis on determining when available empirical evidence is sufficient to support clinically and policy-relevant conclusions under real-world uncertainty.

The methodological core of my work is the development of interpretable longitudinal models that capture heterogeneity in individual and population-level disease trajectories. These include partitioning-based approaches to decomposing trends in prevalence and mortality, as well as longitudinal grade-of-membership and compositional frameworks for forecasting disease progression across care settings. These methods support direct translation of empirical findings into decision-relevant predictions and provide a transparent basis for evaluating their credibility, scope, and limitations in applied contexts.

My research program is collaborative and embedded in a network of projects leveraging national data resources, including Medicare claims and the National Long-Term Care Survey. Current work is supported by multiple concurrent R01-level NIA projects. This program is organized around developing a coherent, data-driven framework for understanding aging, multimorbidity, and AD/ADRD across the care continuum, and for training collaborators and students to reason rigorously about complex empirical evidence in applied decision-making environments.

1.0. EMPLOYMENT HISTORY

2024 – current	***Associate Research Professor***, Duke University, Social Science Research Institute, Biodemography of Aging Research Unit
2020 – 2024	***Senior Research Scientist***, Duke University, Social Science Research Institute, Biodemography of Aging Research Unit
2015 – 2020	***Research Scientist***, Duke University, Center for Population Health and Aging, Biodemography of Aging Research Unit
2013 – 2015	***Research Associate***, Duke University, Trinity College, Department of Economics
2013 – 2013	***Adjunct Faculty***, University of South Florida, College of Arts and Sciences, Department of Economics
2006 – 2013	***Graduate Research Associate***, University of South Florida, College of Arts and Sciences Department of Economics

2007 – 2013	***Adjunct Faculty***, Hillsborough Community College, Department of Economics
2009 – 2013	***Adjunct Faculty***, ITT Technical Institute – Tampa
2001 – 2005	***Graduate Research Assistant***, University of South Florida, College of Public Health, Department of Health Policy, and Management

2.0. EDUCATION

2013	**Doctor of Philosophy in Public Health, Health Services Research,** University of South Florida, Tampa Florida
2006	**Master of Arts in Economics,** University of South Florida, Tampa Florida
2002	**Master of Public Health,** University of South Florida, Tampa Florida
2000	**Bachelor of Arts Magna cum Laude in Economics, Minor in Philosophy, Certificate in Russian Studies** University of South Florida, Tampa Florida

3.0. PUBLICATIONS

1. Akushevich, I., **Yashkin, A.P.**, Kovtun, M., Arbeev, K., Kravchenko, J., & Yashin, A. (2026). Development of an exact theory of decomposing population attributable fractions and application to decomposition of Alzheimer's disease risk. *Mathematical Population Studies*, 1-18.
2. Duan, H., Ukraintseva, S., Holmes, R., Wu, D., **Yashkin, A. P.**, Akushevich, I., ... & Arbeev, K. (2026). Towards personalized vaccine repurposing for Alzheimer's prevention: genotype-specific protective association of the shingles vaccine with odds of Alzheimer's disease in participants of two large cohort studies. *BMC Neurology*.

3. Popov, V. A., Ukraintseva, S., Duan, H., **Yashkin, A.P.**, Kravchenko, J., Akushevich, I., ... & Yashin, A. I. (2025). Traffic-related air pollution significantly aggravates the detrimental effect of infections on the risk of Alzheimer's disease and other dementias, especially in non-carriers of APOE4. *Frontiers in Dementia*, *4*, 1668381.
4. Akushevich, I., **Yashkin, A.P.**, Tupler, L. A., Ouyang, M., & Kravchenko, J. (2025). The absolute and relative concentration-response patterns of exposure to ambient air pollutants and the risk of Alzheimer's disease. *Journal of Alzheimer's Disease*, *107*(2), 586-596.
5. Akushevich, I., Yashkin, **A.P.**, & Kravchenko, J. (2025). Effects of Medicare predictors in health disparities in the risk of Alzheimer's disease. *Alzheimer's & Dementia: Translational Research & Clinical Interventions*, *11*(2), e70078.

6. Kolpakov S., **Yashkin A.P.**, Ukraintseva S., Yashin A., Akushevich I. (2024): Genome-Related Mechanisms Contributing to Differences in Alzheimer's Disease Incidence Between White and Black Older US Adults. *Journal of Racial and Ethnic Health Disparities*, 1-11.
7. **Yashkin A.P.**, Kolpakov S., Ukraintseva S., Yashin A., Akushevich I. (2024): Graves' Disease is Associated with Increased Risk of Clinical Alzheimer's Disease: Evidence from the Medicare System. *Clinical Diabetes and Endocrinology*, 10(1):11.
8. Ukraintseva S., **Yashkin A.P.**, Akushevich I., Arbeev K., Duan H., Gorbunova G., Stallard E., Yashin A. (2024): Associations of infections and vaccines with Alzheimer's disease point to a major role of compromised immunity rather than specific pathogen in AD. *Experimental Gerontology*, 1:190:112411.
9. Ukraintseva S., Duan H., Holmes R., Bagley O., Wu D., **Yashkin A.P.**, Kulminski A., Akushevich I., Whitson H., Stallard E., Yashin A., Arbeev K. (2024): Patterns of Aging Changes in Bodyweight May Predict Alzheimer's Disease. *Journal of Alzheimer's Disease*;97(1):163-170.

10. Bin Y., Kravchenko J., **Yashkin A.P.**, Akushevich I. (2024): Decomposition of Heart Failure Prevalence and Mortality Among Older Adults in the United States: Medicare-Based Partitioning Analysis. *JMIR Public Health and Surveillance*, 10, e51989.
11. Kolpakov S., **Yashkin A.P.,** Akushevich I. (2024): Differences in the Distribution of Aβ in the Brain between US Veterans and Adults aged 62+ and suffering from Alzheimer's Disease. *Annals of biostatistics & biometric applications* 6, no.1, 000630.

12. **Yashkin A. P.**, Gorbunova G. A., Tupler L., Yashin A. I., Doraiswamy, M., Akushevich, I. (2023): Differences in Risk of Alzheimer's Disease Following Later-Life Traumatic Brain Injury in Veteran and Civilian Populations. *The Journal of Head Trauma Rehabilitation*, 01;38(6): E384-E393.
13. Akushevich I., **Yashkin A.P.**, Kovtun M., Stallard E., Yashin A.I., Kravchenko J. (2023): Decomposition of disparities in life expectancy with applications to administrative health claims and registry data. *Theoretical Population Biology*, 153:50-68.
14. Akushevich I., **Yashkin A.P.**, Ukraintseva S., Yashin A.I., Kravchenko J. (2023): The Construction of a Multidomain Risk Model of Alzheimer's Disease and Related Dementias. *Journal of Alzheimer's Disease*, 96(2):535-550.
15. Ukraintseva S., Duan M., Simanek A.M., Holmes R., Bagley O., Rajendrakumar A.L., **Yashkin A.P.**, Akushevich I., Tropsha A., Whitson H., Yashin A.I., Arbeev K. (2023) Vaccination Against Pneumonia May Provide Genotype-Specific Protection Against Alzheimer's Disease. *Journal of Alzheimer's Disease*, 96(2):499-505.
16. Akushevich I., **Yashkin A.P.**, Kovtun M., Kravchenko J., Arbeev K., Yashin, A. I. (2023): Forecasting prevalence and mortality of Alzheimer's disease using partitioning models. *Experimental Gerontology*, 174, 112133.
17. Akushevich I., Kravchenko J., **Yashkin A.P.**, Doraiswamy P. M., Hill C. V., Alzheimer's Disease and Related Dementia Health Disparities Collaborative Group (2023): Expanding the scope of health disparities research in Alzheimer's disease and related dementias: Recommendations from the "Leveraging Existing Data and Analytic Methods for Health Disparities Research Related to Aging and Alzheimer's Disease and Related Dementias" Workshop Series. *Alzheimer's & Dementia: Diagnosis, Assessment & Disease Monitoring*, 15(1), e12415.
18. Arbeev K. G., Bagley, O., **Yashkin A. P.**, Duan H., Akushevich I., Ukraintseva S. V., Yashin A. I. (2023): Understanding Alzheimer's disease in the context of aging: Findings from applications of stochastic process models to the Health and Retirement Study. *Mechanisms of Ageing and Development*, 211, 111791.

19. Akushevich I., **Yashkin A. P.**, Kravchenko J., Kertai, M. D. (2022). Extended anesthesia exposure for abdominal and pelvic procedures in older adults with colorectal cancer: Associations with chart dementia diagnoses. *Experimental Gerontology*, 164, 111830.
20. Gary K. M., Hoque M., **Yashkin, A. P.**, Yashin, A. I., & Akushevich, I. (2022): Does the Chronic Stress of Everyday Discrimination or Race Itself Better Predict AD Onset Risk? *Gerontology and Geriatric Medicine*, 8, 23337214221142944.
21. **Akushevich I.***, Kolpakov S., **Yashkin A. P.*,** Kravchenko, J. (2022): Vulnerability to hypertension is a major determinant of racial disparities in Alzheimer's disease risk. *American journal of hypertension*, *35*(8), 745-751. ***co-first authors.***
22. Yu B., Akushevich I., **Yashkin A. P.**, Yashin A. I., Lyerly H. K., Kravchenko, J. (2022): Epidemiology of geographic disparities in heart failure among US older adults: a Medicare-based analysis. *BMC public health*, 22(1), 1280.

23. Akushevich I., **Yashkin A.P.**, Kovtun M., Yashin A. I., Kravchenko, J. (2022): Underlying mechanisms of change in cancer prevalence in older US adults: contributions of incidence, survival, and ascertainment at early stages. *Cancer Causes & Control*, 33(9), 1161-1172.
24. Nazarian A., Arbeev K.G., **Yashkin A.P.**, Kulminski A. M. (2022): Genome-wide Analysis of Genetic Predisposition to Common Polygenic Cancers. *Journal of applied genetics*, 1-11.

25. **Yashkin A.P.,** Greenup R., Gorbunova G., Akushevich I., Oeffinger K., Hwang S. (2021): Outcomes and Costs for Women After Breast Cancer: Preparing for Improved Survivorship of Medicare Beneficiaries. *Oncology Practice*, 17(4): e469-e478
26. Akushevich I., **Yashkin A.P.**, Kravchenko J., Kertai M.D. (2021): Chemotherapy and the Risk of Alzheimer's Disease in Colorectal Cancer Survivors: Evidence from the Medicare System. *JCO Oncology Practice*, 17(11), e1649-e1659.
27. Akushevich I., **Yashkin A.P.**, Yashin, A.I., Kravchenko J. (2021): Geographic Disparities in Mortality from Alzheimer's Disease and Related Dementias. *Journal of the American Geriatrics Society*, *69(8)*, *2306-2315*.
28. Akushevich I., **Yashkin A.P.**, Kravchenko J., Yashin, A.I., (2021): Analysis of Time Trends in Alzheimer's Diseases and Related Dementia Using Partitioning Approach, *Journal of Alzheimer's Disease*, *82(3)*, *1277-1289*.
29. Yashin A.I., Wu D., Arbeev K., **Yashkin A.P.**, Akushevich I., Bagley O., Duan M., Ukraintseva, S. (2021): Roles of Interacting Stress-related Genes in Lifespan Regulation: Insights for Translating Experimental Findings to Humans. *Journal of translational genetics and genomics*, 5(4), p.357.
30. Yu B., Akushevich I., **Yashkin A.P.**, Kravchenko, J. (2021). Epidemiology of Geographic Disparities of Myocardial Infarction Among Older Adults in the United States: Analysis of 2000–2017 Medicare Data. *Frontiers in cardiovascular medicine*, 8.
31. Ukraintseva S., Duan M., Arbeev K., Wu D., Bagley O., **Yashkin A.P.**, Gorbunova, G., Akushevich, I., Kulminski, A., Yashin, A. (2021): Interactions Between Genes from Aging Pathways may Influence Human Lifespan and Improve Animal to Human Translation. *Frontiers in cell and developmental biology*, *9*.
32. Yashin, A.I., Wu, D., Arbeev, K., Bagley, O., Akushevich, I., Duan, M., **Yashkin, A.P.**, Ukraintseva, S. (2021): Interplay Between Stress-related Genes May Influence Alzheimer's Disease Development: The Results of Genetic Interaction Analyses of Human Data. *Mechanisms of Ageing and Development*, p.111477.

33. Sloan F., **Yashkin A.P.,** Akushevich I., Inman B. (2020): The Cost to Medicare of Bladder Cancer Care. *European Urology Oncology 3(4),515-522*.
34. Akushevich I., **Yashkin A.P.**, Inman I., Sloan F. (2020): Partitioning of Time Trends in Prevalence and Mortality of Bladder Cancer. *Annals of Epidemiology*, 47:25-29.
35. Akushevich I., **Yashkin A.P.**, Greenup R., Hwang S. (2020): A Medicare-based Comparative Mortality Analysis of Active Surveillance in Older Women with DCIS. *NPJ Breast Cancer*, 6(1), 1-8.
36. Sloan F., **Yashkin A.P.**, Akushevich I., Inman B. (2020): Longitudinal Patterns of Cost and Utilization of Medicare Beneficiaries with Bladder Cancer. *Urologic Oncology: Seminars and Original Investigations*, 38(2):39. e11.

37. Akushevich I., Kravchenko J., **Yashkin A.P.**, Fang F., Yashin AI. (2019): Partitioning of Time Trends in Prevalence and Mortality of Lung Cancer. *Statistics in Medicine*, 38(17):3184-3203.

38. Akushevich I, **Yashkin A.P.**, Kravchenko J, Fang F, Arbeev K, Sloan F, and Yashin AI. (2019): Forecasting Model of Disease Prevalence Based on the McKendrick-von Foerster Equation, *Mathematical Biosciences*, 311:31-38.
39. Nazarian A., Arbeev K., **Yashkin A.P.**, Kulminski A. (2019): Genetic Heterogeneity of Alzheimer's Disease in Subjects with and without Hypertension. *GeroScience*, 41(2):137-154.

40. **Yashkin A.P.**, Akushevich I., Ukraintseva S., Yashin AI. (2018): The Effect of Adherence to Screening Guidelines on the Risk of Alzheimer's Disease in Elderly Individuals Newly Diagnosed with Type 2 Diabetes Mellitus. *Gerontology and Geriatric Medicine*, 4, 2333721418811201.
41. Akushevich, I., Kravchenko J., **Yashkin A.P.**, Yashin, AI. (2018): Time trends in the prevalence of cancer and non-cancer diseases among older US adults: Medicare-based analysis. *Experimental gerontology*, 110, 267-276.
42. Yashin AI, Fang F, Kovtun M, Wu D, Duan M, Arbeev K, Akushevich I, Kulminski A, Culminskaya I, Zhbannikov I, **Yashkin, A.P.**, Stallard E, Ukraintseva S. (2017) Hidden heterogeneity in Alzheimer's disease: Insights from genetic association studies and other analyses. *Experimental Gerontology*. 107:148-160.
43. **Yashkin, A. P.**, Sloan, F. (2018): Adherence to Guidelines for Screening and Medication Use: Mortality and Onset of Major Macrovascular Complications in Elderly Persons with Diabetes Mellitus. *Journal of Aging and Health*, 30(4):503-520
44. Akushevich I., **Yashkin A.P.**, Kravchenko J, Fang F., Arbeev K., Sloan F., Yashin A.I. (2018): Identifying the Causes of the Changes in the Prevalence Patterns of Diabetes in Older U.S. Adults: A New Trend Partitioning Approach. *Journal of Diabetes and Its Complications*, 32(4) pp. 362-367.
45. Akushevich I., **Yashkin A.P.**, Kravchenko J, Ukraintseva S, Stallard E, Yashin AI. (2018): Time trends in the Prevalence of Neurocognitive Disorders and Cognitive Impairment in the United States: The Effects of Disease Severity and Improved Ascertainment. *Journal of Alzheimer's Disease*, 64(1):137-148: PMCID: PMC6214183.
46. Kulminski AM, Huang J, Loika Y, Arbeev KG, Bagley O, **Yashkin A.P.**, Duan M, Culminskaya I. (2018): Strong impact of natural-selection-free heterogeneity in genetics of age-related phenotypes. *Aging (Albany NY)*, 10(3):492-514.
47. **Yashkin, A. P.**, Kravchenko, J., Yashin, A. I., Sloan, F. (2018): Mortality and Macrovascular Risk in Elderly with Hypertension and Diabetes: Effect of Intensive Drug Therapy. *American Journal of Hypertension*, 31(2)L220-227

48. Akushevich, I., **Yashkin, A. P.,** Kravchenko, J., Fang, F., Arbeev, K., Sloan, F., Yashin, A. I. (2017): Theory of partitioning of disease prevalence and mortality in observational data. *Theoretical Population Biology*, 114, 117-127.

49. **Yashkin, A. P.**, Hahn, P., & Sloan, F. A. (2016): Introducing anti-vascular endothelial growth factor therapies for AMD did not raise risk of myocardial infarction, stroke, and death. *Ophthalmology*, 123(10), 2225-2231.
50. Picone G, Mroz TA, Sloan FA, **Yashkin, A.P.** (2016): Screening for a Chronic Disease: A Multiple Stage Duration Model with Partial Observability. *International Economic Review*, 57(3), 915-934.
51. Hahn, P., **Yashkin, A. P.**, & Sloan, F. A. (2016): Effect of Prior Anti–VEGF Injections on the Risk of Retained Lens Fragments and Endophthalmitis after Cataract Surgery in the Elderly. *Ophthalmology*, 123(2), 309-315.
52. Kulminski AM, He L, Culminskaya I, Loika Y, Kernogitski Y, Arbeev KG, Loiko E, Arbeeva L, Bagley O, Duan M, **Yashkin, A.P.**, Fang F, Kovtun M, Ukraintseva SV, Wu D, Yashin AI. (2016): Pleiotropic

Associations of Allelic Variants in a 2q22 Region with Risks of Major Human Diseases and Mortality. *PLoS Genet*, 12(11), e1006314.

53. Liang He, Y. Kernogitski, I. Kulminskaya, Y. Loika, K. G. Arbeev, E. Loiko, O. Bagley, M. Duan, **Yashkin, A.P.**, S. V. Ukraintseva, M. Kovtun, A. I. Yashin, and A. M. Kulminski (2016): Pleiotropic Meta-Analyses of Longitudinal Studies Discover Novel Genetic Variants Associated with Age-Related Diseases. *Front Genet*, 7:179.
54. Yashin A.I., I. Zhbannikov, L. Arbeeva, K. G. Arbeev, D. Wu, I. Akushevich, **Yashkin, A.P.**, M. Kovtun, A. M. Kulminski, E. Stallard, I. Kulminskaya, and S. Ukraintseva. (2016): Pure and Confounded Effects of Causal SNPs on Longevity: Insights for Proper Interpretation of Research Findings in GWAS of Populations with Different Genetic Structures. *Front Genet*, 7:188.

55. **Yashkin, A.P.**, Picone G, Sloan FA (2015): Causes of the Change in the Rates of Mortality and Severe Complications of Diabetes Mellitus: 1992–2012. *Medical care* 53(3): 268-275.
56. Abel AS, **Yashkin, A.P.**, Sloan FA, Lee MS (2015): Effect of Diabetes Mellitus on Giant Cell Arteritis. *Journal of neuro-ophthalmology*, 25(2), 134-138.
57. Gray, Natallia, Gabriel Picone, **Yashkin, A.P.** (2015): "Relation between BMI and Diabetes Mellitus and Its Complications among US Older Adults." *Southern Medical Journal* 108(1):29-36.
58. Chen, Y., Sloan, F. A., **Yashkin, A. P.** (2015): Adherence to diabetes guidelines for screening, physical activity and medication and onset of complications and death. Journal of Diabetes and its Complications, 29(8), 1228-1233.
59. Yashin, A. I., Arbeev, K. G., Arbeeva, L. S., Wu, D., Akushevich, I., Kovtun, M., **Yashkin, A.P.**, Kulminski, A., Culminskaya, I., Stallard E., Li, M., Ukraintseva, S. V. (2015): How the effects of aging and stresses of life are integrated in mortality rates: insights for genetic studies of human health and longevity. *Biogerontology*,17(1):89-107 doi: 10.1007/s10522-015-9594-8.

60. Sloan FA, **Yashkin A.P.**, Chen Y (2014): Gaps in Receipt of Regular Eye Examinations among Medicare Beneficiaries Diagnosed with Diabetes or Chronic Eye Diseases. *Ophthalmology* 121(12): 2452-2460.

3.1. PUBLICATIONS (*non-peer-reviewed***)**

1. **Yashkin, A. P.** (2003): Hypertext: Myths and Reality, *Language and Culture* vol. 6 no. 2. Kiev, Ukraine.
2. **Yashkin, A. P.** (2003): Critical Issues in School-Based Drug Education Programs: A Dialogue on Research and Practice. *Teachers Students and Pupils in a Learning Society* vol. 3, Riga, Latvia
3. **Yashkin, A. P.** (2000): On the Moral and Economic Status of Bribery, *Business Partners*, August, Riga, Latvia.

3.2. DISSERTATION

1. **Yashkin, A. P.** (2013): The Dynamics of Alcohol Consumption in the Russian Federation: Implications of Using Price Related Policies to Control Alcohol Use. *Dissertation*, *scholarcommons.usf.edu/etd/4968; Chair: Pracht E., Ph.D.*; Committee**:** Orban B., Ph.D., Picone G., Ph.D., Sear A., Ph.D., Slider D., Ph.D.

3.3. CONFERENCE PRESENTATIONS (*selected*, *verifiable***)**

1. Akushevich, I., **Yashkin, A.P.**, & Kravchenko, J. (2025). Mechanisms of Generating Health Disparities in the Risk of Alzheimer's Disease. *Innovation in Aging*, *9*(Supplement_2), igaf122-2042.
2. Akushevich, I., **Yashkin, A.P.**, Ukraintseva, S., Yashin, A., & Kravchenko, J. (2025). Population Attributable Fractions Associated with Alzheimer's Disease Risk Factors. *Innovation in Aging*, *9*(Supplement_2), igaf122-2529.
3. Akushevich, I., **Yashkin, A.P.**, Tupler, L., Ouyang, M., & Kravchenko, J. (2025). Epidemiology of neuropsychiatric symptoms and AD/ADRD risk and survival in older US adults. *Innovation in Aging*, *9*(Supplement_2), igaf122-1562.
4. Akushevich, I., **Yashkin, A.P.**, Tupler, L., Ouyang, M., & Kravchenko, J. (2025). The absolute and relative concentration-response patterns of air pollutants and the risk of Alzheimer's disease. *Innovation in Aging*, *9*(Supplement_2), igaf122-249.
5. Ukraintseva, S., Duan, H., Holmes, R., Wu, D., **Yashkin, A.P.**, Akushevich, I., ... & Yashin, A. (2025). Personalized vaccine repurposing for AD prevention: Genotype-specific protective association of the shingles vaccine with Alzheimer's disease. *Alzheimer's & Dementia*, *21*, e104190.
6. Ukraintseva, S., Popov, V., Duan, H., **Yashkin, A.P.**, Akushevich, I., Arbeev, K., & Yashin, A. (2025). Traffic-related air pollution significantly aggravates the detrimental impact of infections on the risk of Alzheimer's disease, particularly in non-carriers of APOE4. *Alzheimer's & Dementia*, *21*, e104117.

7. Akushevich, I., **Yashkin, A.P.**, Kravchenko, J., & Yashin, A. (2024). New Measures of Multimorbidity Based on A Theory of Dependent Competing Risks. *Innovation In Aging*, 8(Suppl 1), 870.
8. Akushevich, I., **Yashkin, A.P.**, Bona, V. D., & Kravchenko, J. (2024). Effects Of Environmental Exposure on Disparities in The Risk of Alzheimer's Disease and Related Dementias. *Innovation In Aging*, 8(Supplement_1), 348-348.
9. Akushevich, I., **Yashkin, A.P.**, & Kravchenko, J. (2024). Analytic Methods for Health Disparities in Alzheimer's Disease and Related Dementia. *Innovation In Aging*, 8(Suppl 1), 1021.
10. Gorbunova, G., **Yashkin, A.P.**, Nikitin, S. K., Ukraintseva, S., Yashin, A., & Akushevich, I. (2024). The Role of Treatment Choice in Confounding Associations Between Hashimoto and Alzheimer's Disease. *Innovation In Aging*, 8(Suppl 1), 800.
11. Ukraintseva, S., Popov, V., Duan, H., **Yashkin, A.P.,** Akushevich, I. Arbeev, K., & Yashin A. (2024). Traffic-Related Air Pollution and Infections Jointly Increase the Risk of Alzheimer's Disease in Older Adults. *Innovation In Aging* 8, No. Suppl 1 (2024): 751.
12. **Yashkin, A.P.**, Nikitin, S. K., Gorbunova, G., Kravchenko, J., Yashin, A., & Akushevich, I. (2023). Graves' Disease Is Associated with Increased Risk of Clinical Alzheimer's Disease. *Innovation in Aging*, 7(Suppl 1), 579.
13. Akushevich, I., **Yashkin, A.P.**, Di Bona, V., & Kravchenko, J. (2023). Direct and Indirect Causal Effects of Air Pollutants on Alzheimer's Disease Risk and Disparities. *Innovation In Aging*, 7(Suppl 1), 852.
14. Tupler, L., **Yashkin, A.P.**, Hoque, M., Yashin, A., Akushevich, I., & Stallard, E. (2023). Differences In Cognitive Decline Due to Alzheimer's Disease, Neurodegenerative Disorders, And Trauma. *Innovation In Aging*, 7(Suppl 1), 852.
15. **Yashkin, A.P.**, & Akushevich, I. (2023). Sex and Ethnicity-Related Disparities in Alzheimer's Disease Among Residents of Skilled Nursing Facilities. *Innovation In Aging*, 7(Suppl 1), 175.

16. Akushevich, I., **Yashkin, A.P.**, Nalawade, V., & Kravchenko, J. (2023). Risk Of Alzheimer's Disease and Related Dementia in Patients with Slow Progressive Cancers. *Innovation In Aging*, 7(Suppl 1), 391.
17. Nikitin, S. K., **Yashkin, A.P.**, & Akushevich, I. (2023). Localization Of B-Amyloid Plaques in The Brains of War Veterans, Participants of The Dod-Adni Study. *Innovation In Aging*, 7(Suppl 1), 688.
18. Akushevich, I., **Yashkin, A.P.**, Ukraintseva, S., Yashin, A., & Kravchenko, J. (2023). Evaluating Population Attributable Fractions Associated with Alzheimer's Disease Risk Factors. *Innovation In Aging*, 7(Supplement_1), 853-853.

19. **Yashkin A.P.**, Akushevich I., Yashin A., Gorbunova G.A., Ukraintseva S. (2022): Fungal Infections, Use of Antifungal Agents, and the Risk of Alzheimer's Disease, *Innovation in Aging*, 6(suppl 1), 1–2.
20. Akushevich I., **Yashkin A.P.**, Kravchenko J. (2022): Geographic Disparities in Incidence and Mortality of Alzheimer's Disease, *Innovation in Aging*, 6(suppl 1), 2.
21. Arbeev K., Bagley O., **Yashkin A.P.**, Duan H., Nalawade V., Akushevich I., Yashin A. et.al. (2022): Alzheimer's Disease and Comorbidities: A Complex Interplay in the Context of Aging. *Innovation in Aging*, 6(suppl 1), 49-50.
22. Ukraintseva S., Popov V., Duan H., **Yashkin A.P**., Akushevich I., Arbeev K., & Yashin A. (2022): Adult Infections are Associated with Higher Risk of Alzheimer's Disease but Lower Risk of Cancer. *Innovation in Aging*, 6(suppl 1), 765.
23. **Yashkin A.P.**, Akushevich I., Gorbunova G., Yashin A. (2022): Traumatic Brain Injury in the Elderly as a Risk Factor for Alzheimer's Disease and Related Dementias: Short Term or Long-Term Risk? *2022 Population Association of America Annual Meeting*.
24. Akushevich I., **Yashkin A.P.**, Nikitin S., Kravchenko J. (2022): Causes of Racial Disparities in Alzheimer's Disease Risk. *2022 Population Association of America Annual Meeting*.
25. Akushevich I., **Yashkin, A.P.**, Kravchenko J. (2022): A new approach for quantifying structural racism and discrimination with an application to Alzheimer's disease risk. *2022 Population Association of America Annual Meeting*.
26. Akushevich I., **Yashkin A.P.**, Kovtun M., Kravchenko J., Arbeev K., Yashin A. (2022): Forecasting Prevalence and Mortality of Alzheimer's Disease Using Partitioning Models. *2022 Population Association of America Annual Meeting*.
27. Arbeev K., Bagley O., **Yashkin A.P.,** Duan H., Akushevich I., Ukraintseva S., Yashin A. (2022): Understanding Alzheimer's Disease in the Context of Aging: Findings from Applications of Biodemographic Models. *2022 Population Association of America Annual Meeting*.
28. Yashin A., Wu D., Arbeev K., Bagley O., Duan M., Akushevich I., **Yashkin A.P.**, Ukraintseva S. (2022): Genetics of Aging-Related Cognitive Decline: Roles of MicroRNA-by-Gene Interactions in Alzheimer's Disease. *2022 Population Association of America Annual Meeting*.

29. **Yashkin, A. P.** (2021): Using administrative claims to model health-related behaviors: measures of screening and medication adherence. *Innovation in Aging*, 5 (suppl 1), 275-275.
30. **Yashkin, A. P.,** Yashin, A., Gorbunova, G., & Akushevich, I. (2021): Racial differences in the effect of Alzheimer's disease on adherence to medication therapy for chronic diseases. *Innovation in Aging*, 5 (suppl 1), 60-61.
31. **Yashkin, A. P.**, Gorbunova, G., Yashin, A., & Akushevich, I. (2021): Implications of racial differences in the shifts in the setting of care for Alzheimer's Disease and related dementias. *Innovation in Aging*, 5 (suppl 1), 647-648.

32. **Yashkin A.P.**, Akushevich I., Yashin A., Kravchenko J. (2021): Geographic Disparities in Mortality from Alzheimer's Disease and Related Dementias. *2021 Population Association of America Annual Meeting*.
33. **Yashkin A.P.**, Kravchenko J., Gorbunova G., Akushevich I. (2021): Gender and Geography-related Disparities in U.S. Life Expectancy: Time Trends and Disease Contributions. *2021 Population Association of America Annual Meeting*.
34. **Yashkin A.P.**, Gorbunova G., Kravchenko J., Akushevich I. (2021): Identifying Race, Ethnicity, Geographic and Gender-Related Hotspots in Alzheimer's Disease Prevalence, Incidence and Mortality Over the 1991-2017 Time Period: Evidence from the Medicare System. *2021 Population Association of America Annual Meeting*.
35. Nikitin, S., **Yashkin, A. P.**, & Akushevich, I. (2021): Links of autoimmune thyroid disorders to Alzheimer's disease for Medicare beneficiaries ages 65+. *Innovation in Aging*, 5 (suppl 1), 305-305.
36. Nikitin, S., **Yashkin, A. P.**, Kravchenko, J., & Akushevich, I. (2021): Causes of the racial disparities in the risk of Alzheimer's disease. *Innovation in Aging*, 5 (suppl 1), 59-59.
37. Akushevich, I., **Yashkin, A. P.**, & Kravchenko, J. (2021): Geographic disparities of Alzheimer's disease mortality in females with breast cancer. *Innovation in Aging*, 5 (suppl 1), 60-60.
38. Ukraintseva, S., **Yashkin, A. P.**, Akushevich, I., Arbeev, K., Duan, M., Tropsha, A., et.al. (2021): Compromised immunity rather than specific microbe may increase vulnerability to Alzheimer's disease, and vaccines with beneficial off-target effects may support immunity and prevent AD. *Alzheimer's & Dementia*, 17, e053317.
39. Yashin, A., Wu, D., Arbeev, K., Bagley, O., Akushevich, I., **Yashkin, A. P.**, et. al. (2021): The interplay between stress related genes and its role in human longevity: insights for translational studies. *I. ovation in Aging*, 5 (supplement_1), 671-671.
40. Yashin, A., Wu, D., Arbeev, K., Bagley, O., Akushevich, I., **Yashkin, A. P.**, et. al. (2021): Significant associations of the interplay between stress related genes with Alzheimer's disease. *Innovation in Aging*, 5 (suppl 1), 640-641.
41. Yashin A.I., Wu D., Arbeev K., Bagley O., Duan M., Akushevich I., **Yashkin A.P.**, Ukraintseva S. (2021) Evaluating collective associations of many pairs of interacting genetic and non-genetic factors with Alzheimer's disease: Insights for studying mechanisms of multifactorial regulation of complex traits. 12th Annual Integrating Genetics and Social Sciences Conference (IGSS 2021). Boulder, CO, USA, October 28-29, 2021.
42. Arbeev K.G., Bagley O., Akushevich I., **Yashkin A.P.**, Duan H., Ukraintseva S.V., Yashin A.I. (2021) Evaluating Trends in Incidence of Alzheimer's Disease Using Biodemographic Models of Health and Aging. The 2021 Annual Meeting of the Population Association of America (PAA). Virtual conference (due to the COVID-19 pandemic), May 5-8, 2021.
43. Akushevich I., **Yashkin A.P.**, Kravchenko J., Arbeev K., Wrobleski B., Yashin A. (2021) Forecasting Prevalence of Alzheimer's Disease and Related Dementias Using the McKendrick-von Foerster's Model. The 2021 Annual Meeting of the Population Association of America (PAA). Virtual conference (due to the COVID-19 pandemic), May 5-8, 2021.
44. Yashin A., Wu D., Arbeev K., Duan H., Bagley O., Akushevich I., **Yashkin A.P.**, Ukraintseva S. (2021) How Multiple Interactions Between Genetic and Nongenetic Factors Influence Multifactorial Health Disorders: Insights from Studying Alzheimer's Disease. The 2021 Annual Meeting of the Population Association of America (PAA). Virtual conference (due to the COVID-19 pandemic), May 5-8, 2021.

45. **Yashkin, A.P.,** Akushevich, I., & Yashin, A. (2020): Determinants of adherence to ADA type ii diabetes mellitus guidelines: implications for longevity. *Innovation in Aging*, 4 (supplement_1), 225-225.
46. **Yashkin, A.P.** (2020): Traumatic brain injury and dementia in Medicare population: differences in risk between veterans and non-veterans. *Innovation in Aging*, 4 (suppl 1), 850.
47. **Yashkin, A.P.**, Akushevich, I., & Yashin, A. (2020): Exclusion of Medicare advantage enrollers from Medicare health outcomes analyses: potential for bias. *Innovation in Aging*, 4 (suppl 1), 172.
48. **Yashkin, A.P.**, Akushevich I., Yashin A. (2020): Racial and Ethnicity-Related Disparities in Adherence to Type II Diabetes Mellitus Screening Guidelines: Implications for Longevity. *2020 Population Association of America Annual Meeting*.
49. Akushevich I., **Yashkin A.P.**, Yashin A., Kravchenko J. (2020): Geographic Disparities in Mortality from Alzheimer's Disease and Related Dementias. *2020 Population Association of America Annual Meeting*.
50. Akushevich, I., **Yashkin, A. P.,** Kravchenko, J., & Kertai, M. (2020): Chemotherapy and anesthesia in colorectal cancer survivors and the risk of Alzheimer's disease. *Innovation in Aging*, 4 (supplement_1), 263-264.
51. Akushevich, I., **Yashkin, A. P.,** Kravchenko, J., & Yashin, A. (2020): Causes of time trends in prevalence and mortality of major cancers among us older adults. *Innovation in Aging*, 4 (suppl 1), 145.
52. Ukraintseva, S., **Yashkin, A. P.**, Duan, M., Akushevich, I., Arbeev, K., Wu, D., et. al. (2020): Repurposing of existing vaccines for personalized prevention of Alzheimer's disease: vaccination against pneumonia may reduce ad risk depending on genotype: genetics/genetic factors of Alzheimer's disease. *Alzheimer's & Dementia*, 16, e046751.
53. Arbeev K.G., Akushevich I., **Yashkin A.P.**, Bagley O., Duan H., Ukraintseva S.V., Yashin A.I. (2020) Biodemographic Models of Health and Aging: Applications to Building Predictive Models for Alzheimer's Disease Using Health and Retirement Study Data. The 2020 Annual Meeting of the Population Association of America (PAA). Washington, DC, USA, April 22-25, 2020 (virtual conference, due to the COVID-19 pandemic).
54. Yashin, A., Wu, D., Arbeev, K., **Yashkin, A. P.,** Gorbunova, G., Akushevich, I., et. al. (2020): Stress mediating genes in aging, health, and longevity traits: effects of multiple interactions. *Innovation in Aging*, 4 (supplement_1), 286-286.
55. Arbeev, K., Bagley, O., **Yashkin, A. P.,** Duan, H., Akushevich, I., Ukraintseva, S., & Yashin, A. (2020): Applications of stochastic process models to construct predictive models of Alzheimer's disease. *Innovation in Aging*, 4 (suppl 1), 263.

56. Ukraintseva S., Akushevich I., **Yashkin A.P.**, Duan M., Arbeev K., Wu D., Cohen T., Tropsha A., Yashin A. (2019) Vaccination against pneumonia in the elderly may reduce Alzheimer's risk. The Alzheimer's Association International Conference 2019 (AAIC 2019). Los Angeles, CA, USA, July 14-18, 2019.
57. Akushevich, I., **Yashkin, A. P.**, Ukraintseva, S., Yashin, A. (2019): Use of analytic methods and Medicare data in the analyses of disparities in AD/ADRD health outcomes. *Innovation in Aging*, 3 (suppl 1), s426.
58. Greenup, R. A., **Yashkin, A. P.**, Gorbunova, G., Akushevich, I., & Hwang, E. S. (2019): Medicare costs for women after breast cancer: preparing for survivorship. *Cancer Research*, 4 (Supplement): PD6-08. *San Antonio Breast Cancer Symposium*.

59. Yashin, A., Wu, D., Arbeev, K., Akushevich, I., **Yashkin, A. P.**, Duan, M., et. al. (2019): New approach to studying collective effects of genetic factors on Alzheimer's disease. *Innovation in Aging*, 3 (suppl 1), s96.

60. **Yashkin, A. P.**, Akushevich, I., Kravchenko, J., & Yashin, A. I. (2018): Concordance of trends in self-reported and Medicare disease prevalence in the HRS. *2018 Population Association of America Annual Meeting*.
61. Akushevich, I., **Yashkin, A. P.,** Kravchenko, J., & Yashin, A. (2018): Effects of lifestyle, socioeconomics, and age-related diseases on risk of Alzheimer's disease and other dementias. *Innovation in Aging*, 2 (suppl 1), 138.
62. Akushevich, I., **Yashkin, A. P.**, Kravchenko, J., & Yashin, A. I. (2018): Racial and geographic disparities in risk and survival of Alzheimer's disease and related dementias. *2018 Population Association of America Annual Meeting*.
63. Akushevich, I., **Yashkin, A. P.**, Kravchenko, J., Fang, F., Arbeev, K., Sloan, F., & Yashin, A. I. (2018): Forecasting diabetes prevalence using the Mckendrick-von Foerster's model and comparison with other approaches. *2018 Population Association of America Annual Meeting*.
64. Ukraintseva S., Duan H., Arbeev K., Zhbannikov I., Bagley O., **Yashkin A.P.**, Stallard E., Kulminski A., Akushevich I., Yashin A. (2018) Understanding relationships among APOE4, BMI, Alzheimer's disease, and longevity, using Mendelian Randomization approach. The American Society of Human Genetics (ASHG) 68th Annual Meeting. San Diego, CA, USA, October 16-20, 2018.
65. Arbeev K.G., Bagley O., Duan H., **Yashkin A.P.**, Kulminski A.M., Culminskaya I.V., Ukraintseva S.V., Yashin A.I. (2018) Genetics of the Measure of Physiological Dysregulation: Findings from the Health and Retirement Study. The International Genetic Epidemiology Society (IGES) 27th Annual Meeting. San Diego, CA, USA, October 14-16, 2018 (poster).

66. **Yashkin, A. P.,** Akushevich, I., & Yashin, A. I. (2017): The effect of adherence to diabetes guidelines on nursing home entry and health at time of admission. *Innovation in Aging*, 1 (suppl 1), 561.
67. **Yashkin A.P.**, Akushevich I., Ukraintseva S., Yashin A. (2017): The Effect of Adherence to Diabetes Guidelines on Risk of Alzheimer's Disease, *2017 Alzheimer's Association Annual Meeting*.
68. Akushevich, I., **Yashkin, A. P.,** Kravchenko, J., F., & Yashin, A. I. (2017): Partitioning of time trends in mortality of lung cancer among older adults. *Innovation in Aging*, 1 (suppl 1), 462.
69. Akushevich, I., **Yashkin, A. P.,** Kravchenko, J., & Yashin, A. I. (2017): Time trends of Alzheimer's disease: addressing contradictory issues. *Innovation in Aging*, 1 (suppl 1), 1047.
70. Akushevich, I., **Yashkin, A. P.**, Kravchenko, J., & Yashin, A. (2017): Alzheimer's disease and cognitive impairment in the United States: issues and ascertainment of time trends in prevalence and mortality. *2017 Population Association of America Annual Meeting*.
71. Ukraintseva S., Akushevich I., **Yashkin A.P.**, Kravchenko J., Arbeev K., Kulminski A., Polity R., Tropsha A., Yashin A.I. (2017) On the role of infection in Alzheimer's disease (AD): Herpes viruses are associated with significant increase in AD risk in a large population-representative sample of elderly individuals. The Alzheimer's Association International Conference 2017 (AAIC 2017). London, England, July 16-20, 2017 (poster).
72. Yashin, A.I., Fang, F., Kovtun, M., Wu, D., Akushevich, I., **Yashkin, A. P.,** Arbeev, K., et. al. (2017): Biodemography of Alzheimer's disease: puzzling connections with health and longevity related traits. *2017 Population Association of America Annual Meeting*.

73. **Yashkin A.P.**, Akushevich I., Fang F., Yashin A. (2016): Trends in Diabetes Mellitus and Related Health Outcomes 1991 – 2013: Achievements and Challenges, *2016 GSA Annual Scientific Meeting*.
74. Yashin A.I., Akushevich I., **Yashkin A.P**., Fang F., Wu D., Arbeeva L., Arbeev K., Ukraintseva S. (2016) Relationships among aging, health, and longevity in HRS: Causal analyses using Mendelian randomization. The Gerontological Society of America's 69th Annual Scientific Meeting. New Orleans, LA, USA, November 16–20, 2016.
75. Yashin A.I., Zhbannikov I., Arbeeva L.S., Arbeev K.G., Akushevich I., Kovtun M., Kulminski A., Li M., **Yashkin A.P.**, Wu D., Stallard E., Ukraintseva S.V. (2016) Biodemographic Aspects of the Non-Replication Problem Emerged in Genetic Association Studies of Human Aging, Health, and Mortality. The Population Association of America 2016 Annual Meeting. Washington, DC, USA, March 30 – April 2, 2016.

76. Zhbannikov I., Akushevich I., Kovtun M., **Yashkin A.P.**, Li M., Arbeev K.G., Ukraintseva S., Yashin A.I. (2015) New approaches to identification of longevity-related traits with censored data. The Gerontological Society of America's 68th Annual Scientific Meeting. Orlando, FL, USA, November 18–22, 2015.
77. Yashin A.I., Arbeev K.G., Arbeeva L.S., Wu D., Akushevich I., Kovtun M., **Yashkin A.P.**, Kulminski A., Culminskaya I., Stallard E., Li M., Ukraintseva S.V. (2015) How Human Mortality Rates Integrate Aging Changes and External Challenges: Insights into Genetics of Longevity Related Traits. Gordon Research Conference: Biology of Aging. Newry, ME, USA, July 19-24, 2015 (poster).

78. **Yashkin A.P.,** Jones C. (2013): Alcohol Consumption in Russia: Does Method of Delivery Matter? *1st International Russia Longitudinal Monitoring Survey of HSE User Conference*, *Moscow*, *Russia*, *2013*.
79. **Yashkin A.P.** (2005): Myths, Misconceptions, and an Alternative Perspective on the Moral Justifiability of Drug Abuse Treatment Programs. *IV Russian Congress of Philosophy "Philosophy and the Future of Civilization," Moscow*, *Russia*, *2005*.
80. **Yashkin A.P.** (2005): Narrative Medicine: Potentials and Limitations of Literary Text in Medical Practice. *XIII International Conference "Language and Culture" devoted to the memory of Professor Sergey Burago*, *Kiev*, *Ukraine*, *2005*.
81. **Yashkin A.P.** (2003): Hypertext: Myths and Reality. *XII International Conference "Language and Culture" devoted to the memory of Professor Sergey Burago*, *Kiev*, *Ukraine*, *2003.*
82. **Yashkin A.P.** (2003): Critical Issues in School-Based Drug Education Programs: A Dialogue on Research and Practice. *Association for Teacher Education in Europe*, *University of Latvia*, *Riga*, *2003.*
83. **Yashkin A.P.** (2001): Euthanasia: Economic Efficiency vs. Traditional Values. *International Conference on Ontology of Dialogue as the Main Value of Cultural and Religious Experience*, *sponsored by the Russian Academy of Science and UNESCO*, *St. Petersburg*, *Russia 2001.*

3.4. INVITED TALKS AND PRESENTATIONS

1. **Yashkin A.P.** (2023): Alzheimer's Disease Disparities in Skilled Nursing Facilities. *Leveraging Existing Data and Analytic Methods for Health Disparities Research Related to Aging Workshop*, *Duke University (*live recording at Hosted on YouTube).

2. **Yashkin A.P.** (2022): The minimal dataset and Medicare-linked data: design, methods, and applications. *Leveraging Existing Data and Analytic Methods for Health Disparities Research Related to Aging Workshop, Duke University* (live recording at Hosted on You Tube).
3. **Yashkin A.P.** (2019): Incorporating Medicare Data in Aging Research: Expanding Opportunities. *Leveraging Existing Data and Analytic Methods for Health Disparities Research Related to Aging Workshop, Duke University (live recording at* Hosted on You Tube).

4.0. MANUSCRIPTS IN PROGRESS

- **Yashkin, A.P.** (forthcoming, under contract; invited). Chapter 11. *Maximizing the Potential of Interlinked Data Sources for Biodemography of Aging: Navigating the Challenges*. In *Biodemography and Genetics of Aging, Health and Life Span*. Springer.

5.0. PEER REVIEW (selected**)**

Ad-hoc reviewer for the following journals: Diabetes, Obesity and Metabolism, Alzheimer's & Dementia, Medical Care, Gerontology and Geriatric Medicine, Journal of Aging and Health, Journal of Clinical Medicine, Frontiers in Neurology, Frontiers in Aging Neuroscience, Frontiers in Cardiovascular Medicine.

6.0. EDITORIAL BOARD

- Editorial Board Member, FRONTIERS: Alzheimer's Disease and Related Dementias

7.0. TEACHING EXPERIENCE

Undergraduate instruction in economics, statistics, and quantitative methods (University of South Florida; Hillsborough Community College; ITT Technical Institute): Principles of Microeconomics; Principles of Macroeconomics; Introduction to Statistics; Undergraduate Mathematics; Clinical Coding. Emphasized applied quantitative reasoning and interpretation of empirical evidence. Teaching Evaluations (selected) are available upon request and show consistently high ratings across instructor effectiveness, clarity, and course organization.

Research mentorship and graduate training (Duke University): Mentoring early-career collaborators and post-graduate trainees in the design, analysis, and dissemination of studies using large-scale longitudinal and administrative datasets, including work on the National Long-Term Care Survey.

Developed graduate elective: *Evidence-Based Decision Making in Healthcare* (MHA/MPH).

8.0. RESEARCH SUPPORT

My research program is collaborative and spans multiple institutions, including Duke University, the University of Washington, and Columbia University, and is structured around concurrent projects using national administrative and longitudinal datasets. Fully funded, the combined portfolio of my work and that of core collaborators may exceed $5 million annually; maintaining full program scope typically

involves multiple concurrent R01-level projects. Smaller awards serve as supplements to this core portfolio. The Pending Support (8.1) section reflects recent submissions, resubmissions, and proposals in development.

Roles are defined as follows: PI: led conceptual development and writing; assembled research teams; designed projects using national data resources and established collaborations. MPI: shared leadership with a second senior investigator where complementary expertise is required. Co-Investigator/Senior Investigator: administrative designations varying by agency, with substantive intellectual contributions, including modeling, data integration, and long-term stewardship of key resources (e.g., the National Long-Term Care Survey).

8.1. PENDING RESEARCH SUPPORT

Submitted/Under revision or review

- **PI**, NIH Office of the Director R01OD041976-01 (submitted 2026) *Transforming Disease Progression Modeling: A Compositional Inference System for Alzheimer's Care Transitions Using CMS-linked Data*
- **PI**, National Institute on Aging R01-AG096410 (A1 resubmission, 2026) *The Impact of Multimorbidity on Alzheimer's Disease Onset and Progression Across the Care Continuum*
- **PI**, National Institute on Aging R01-AG096307 (A1 resubmission, 2026) *Forecasting Heterogeneous Alzheimer's Disease Trajectories in Older Adults Requiring Home Health Care Using Longitudinal Grade of Membership Modeling (original submission as MPI: Mitigating Health Disparities in Alzheimer's Disease among U.S. Home Health Recipients: Intervention Design through Advanced Biodemographic Modeling, 2025)*
- **PI**, National Institute on Aging R01-AG096577 (A1 resubmission, 2026) *The Impact of Type II Diabetes Mellitus on Alzheimer's Disease Onset and Progression Across the Care Continuum*
- **PI**, National Institute on Aging R01-AG095528 (A1 resubmission, 2026) *Forecasting Heterogeneous Alzheimer's Disease Trajectories in U.S. Nursing Homes Using Longitudinal Grade of Membership Modeling (original submission as MPI: Mitigating Health Disparities in Alzheimer's Disease among U.S. Nursing Home Residents: Intervention Design through Advanced Biodemographic Modeling, 2025)*
- **MPI**, National Institute on Aging R01-AG063971 (renewal, 2025) *Genetic and Non-Genetic Modulators of Morbidity/Disability Compression in a Large Population-Based Study of Cognitive and Physical Impairment with Emphasis on Alzheimer's Disease and Related Dementias* (co-MPI: Stallard)
- **MPI**, National Institute on Aging R01-AG095517 (submitted 2025) *The Role of Structural Race-Related Disparities in the Risk of Alzheimer's Disease and Related Dementias Among Older U.S. Adults* (co-MPI: Akushevich)
- **MPI**, National Institute on Aging R01-AG095401 (submitted 2025) *Estimation and Projection of the Direct Monetary Costs of Alzheimer's Disease and Related Dementia to Medicare and Medicaid: Preclinical Diagnosis to High-Level Care and Death* (co-MPI: Stallard)

In Development

- **PI**, National Institute on Aging (number pending) *Characterizing the joint evolution of Alzheimer's disease and mortality following slow-progressive cancer*.

- **PI,** Patient-Centered Outcomes Research Institute (number pending) *Improving Cancer Care Decision Making with PCORnet and GPC GROUSE: Comparative Effectiveness of Cancer Treatment Pathways via Longitudinal Grade of Membership Modeling*.

8.2. ONGOING RESEARCH SUPPORT

- **Senior Investigator**, Department of Defense Grant HT94252410255 (2024–2027) *A practical multidomain risk model of Alzheimer's disease and related dementias for veteran and non-veteran older U.S. adults* (PI: Akushevich)
- **Co-Investigator**, National Institute on Aging R01-AG076019 (2021–2026) *Leveraging population-based human data to uncover mechanisms connecting Alzheimer's disease and common infections and facilitate vaccine repurposing for AD prevention* (PI: Ukraintseva; Funding: $3,065,046)
- **Co-Investigator**, National Institute on Aging R01-AG063971-04S1 (2023–2025) *Migrating the National Long-Term Care Survey to the MedRIC Health and Aging Data Enclave* (PI: Stallard)
- **Co-Investigator**, National Institute on Aging R01-AG063971 (2020–2025) *Genetic and non-genetic modulators of morbidity/disability compression in a large population-based study of cognitive and physical impairment with emphasis on Alzheimer's disease and related dementias* (PI: Stallard)

8.3. COMPLETED RESEARCH SUPPORT

- **Co-Investigator**, National Institute on Aging U19 AG063893 (subcontract from WUSTL WU-21-0443; 2019–2024) *The Long-Life Family Study and Analysis* (sub-PI: Yashin)
- **Senior Investigator**, National Institute on Aging R01-AG070487 (2020–2024) *Genetics of aging, health, and longevity: focus on regulatory mechanisms and functional variants connecting aging and Alzheimer's disease* (PI: Yashin)
- **Senior Investigator**, National Institute on Aging R01-AG062623 (2019–2024) *Understanding Alzheimer's disease in the context of aging* (PI: Yashin)
- **Senior Investigator**, National Institute on Aging R01-AG066133 (2019–2024) *Racial and geographic disparities in risk and survival of Alzheimer's disease and related dementias* (PI: Akushevich)
- **Co-Investigator**, National Institute on Aging R01-AG057801 (2019–2024) *Determinants of geographic disparities in mortality and multimorbidity in the U.S.* (PI: Kravchenko)
- **Investigator**, National Institute on Aging RF1-AG046860 (2014–2023) *Genetics of changes in population pyramids: implications for health forecasting with a focus on Alzheimer's disease and related dementias* (PI: Yashin)
- **Senior Investigator**, Department of Defense W81XWH-20-1-0253 (2020–2023) *Evaluating effects in the relationship between traumatic brain injury and Alzheimer's disease: epidemiological determinants and resulting disparities* (PI: Akushevich)
- **Senior Investigator**, National Institute on Aging R56-AG059428 (2018–2020) *Bioinformatics approaches to advance drug repositioning for Alzheimer's disease* (PI: Tropsha; Duke subcontract: sub-PI Ukraintseva)
- **Co-Investigator**, Patient-Centered Outcomes Research Institute CER-1503-29572 (2016–2020) *Comparing the effectiveness of guideline-concordant care to active surveillance for DCIS: an observational study* (PI: Hwang)

- **Co-Investigator**, Bladder Cancer Advocacy Network 2831651 (2018–2019) *The cost of bladder cancer to Medicare* (PI: Sloan)
- **Co-Investigator**, National Institute on Aging R01-AG046860 (2014–2019) *Genetics of changes in population pyramids: implications for health forecasting* (PI: Yashin)
- **Co-Investigator**, National Institute on Aging R01-DA032548-03 (2013–2015) *Parent effects of drug treatment courts on outcomes of adults and children* (PI: Sloan)
- **Co-Investigator**, National Institute on Aging R01-AA017913-04 (2013–2014) *Deterring drunk driving: beliefs, preferences, outcomes, and welfare implications* (PI: Sloan)
- **Co-Investigator**, National Institute on Aging R01-AG017473 (2010–2016) *Visual impairment, treatment, and effects on the elderly* (PI: Sloan)
- **Co-Investigator**, National Institute on Aging 06-SC-NIH-1015 (2005–2009) *Visual impairment, treatment, and effects on the elderly* (PI: Sloan)
- **Research Staff**, Fogarty International Center R03-TW009108-01 (2011–2013) *Social interactions and malaria preventive behaviors in Sub-Saharan Africa* (PI: Picone)

9.0. SERVICE

2020 – current ***Hiring Committee***, Duke University, Social Science Research Institute, Biodemography of Aging Research Unit

10.0. ACADEMIC AWARDS AND HONORS

2024 Editor's Choice, Journal of Alzheimer's Disease 97(1):163–170. "*Patterns of Aging Changes in Bodyweight May Predict Alzheimer's Disease*".

2023 Featured Article, Alzheimer's & Dementia: Translational Research & Clinical Interventions 15:e12415. "*Expanding the scope of health disparities research in Alzheimer's disease and related dementias*".

2021 Featured Article (featured on release), JCO Oncology Practice 17(4):e469–e478. "*Outcomes and Costs for Women After Breast Cancer: Preparing for Improved Survivorship of Medicare Beneficiaries*".

2019 Editor's Choice, Journal of Alzheimer's Disease 64(1):137–148. "*Time Trends in the Prevalence of Neurocognitive Disorders and Cognitive Impairment in the United States: The Effects of Disease Severity and Improved Ascertainment*".

2003 COPH Student Honorary Awards for Research and Practice ("SHARP")

2001 COPH Student Honorary Awards for Research and Practice ("SHARP")

1999 Evelyn Underwood Rogers End Scholarship from the College of Arts and Sciences

1999 Alice E. Keefe Scholarship from the College of Arts and Sciences

1998 Evelyn Underwood Rogers End Scholarship from the College of Arts and Sciences

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11.0. APPENDIX: Alignment with MCHES Competencies—Nine Areas of Responsibility (HESPA III 2025)

My academic training and professional experience provide substantial alignment with the Nine Areas of Responsibility for Health Education Specialists as defined by the Health Education Specialist Practice Analysis III (HESPA III 2025). This alignment is supported by graduate-level coursework completed at the University of South Florida and by sustained research, teaching, instructional, and leadership activities documented in my curriculum vitae. My preparation follows a non-traditional but methodologically coherent pathway: doctoral training in public health with specialization in health services research, combined with advanced graduate training in econometrics, statistics, health services management, and health economics. The MCHES equivalency pathway is designed to accommodate such profiles, and the evidence below demonstrates coverage of all nine competency areas through formal graduate training in the analytical core and applied professional experience across implementation, communication, advocacy, administration, and leadership domains.

My preparation is strongest in Areas I, II, IV, and V, which correspond to the analytical and methodological core. Areas III, VI, VII, VIII, and IX are supported through applied experience, including undergraduate instruction across multiple institutions, delivery of professional training workshops, leadership in NIH- and PCORI-funded research, a sustained publication record, and mentorship and service activities. In particular, the PCORI-funded comparative effectiveness study of guideline-concordant care versus active surveillance for ductal carcinoma in situ (CER-1503-29572) provides unusually strong applied evidence across several HESPA III domains because it required planning, cross-cultural adaptation, implementation, evaluation, and stakeholder-oriented communication within a multi-site patient-centered research design.

Area I: Assessment

Graduate training provides a rigorous foundation for population-level assessment through advanced statistical and econometric methods. Relevant coursework includes **PHC 6000 Epidemiology, PHC 6051 Biostatistics II**, **PHC 6191 Quantitative Analysis in Health Care Management**, **PHC 6053 Categorical Data Analysis**, **ECO 6424 Econometrics I**, **ECO 6425 Econometrics II**, **ECO 6936 Econometrics III**, **ECO 6936 Econometrics IV**, **QMB 6375 Applied Linear Statistical Models**, **QMB 7516 Applied Multivariate Statistical Methods**, **STA 5326 Mathematical Statistics I**, and **STA 5526 Non-Parametric Statistics**. These courses support modeling health outcomes, identifying determinants of disease, and assessing variation across populations.

In research, these competencies are applied to large-scale administrative and longitudinal datasets, including Medicare claims and the National Long-Term Care Survey, to characterize disease risk and distinguish between differential exposure and differential vulnerability across subpopulations. Additional assessment competencies were demonstrated in the PCORI-funded DCIS study (CER-1503-29572), where assessment work included defining patient eligibility criteria, identifying cohorts through cancer registry and radiology-pathology records, and conducting preliminary data queries across national cancer data resources to characterize the study population before implementation.

Area II: Planning

Planning competencies are strongly supported by graduate coursework emphasizing health system design, economic evaluation, and decision-making under constraints, including **PHC 6976 Health Services Plan/Eval**, **PHC 6976 Primary Health Care Strategies**, **PHC 6180 Health Services Management**, **PHC 6160 Health Care Financial Management**, **PHC 6433 Health Economics II**, and **ECO 6936 Economic Policy Analysis** .

Applied planning is demonstrated especially clearly in the PCORI DCIS study. As lead on Aim 3, I designed patient preference survey instruments, and helped adapt and translate them into Spanish

using back-translation procedures, pre-test them with target patient populations, and integrate preference-based utility measures into a Markov decision framework to support treatment planning. These activities required competency in instrument planning, cross-cultural adaptation, sequencing of study tasks across sites, and aligning analytic design with patient-centered decision objectives. Additional planning evidence includes development of the graduate elective *Evidence-Based Decision Making in Healthcare*, including competency-aligned learning objectives, cumulative module design, and assessments structured around professional decision tasks.

Area III: Implementation

Implementation competencies are demonstrated through both teaching and applied research execution. From 2007 through 2013, I taught undergraduate economics and quantitative methods courses across three institutions, implementing structured curricula for diverse student populations and adapting delivery to varied instructional settings. More recently, I delivered three invited pedagogical sessions in Duke University's *Leveraging Existing Data and Analytic Methods for Health Disparities Research Related to Aging* workshop series, each with defined learning objectives and a professional training purpose.

The PCORI DCIS project provides additional direct evidence of implementation. The patient preference survey component was administered across three sites in both English and Spanish, requiring standardized protocol execution, coordination across participating settings, and consistent implementation of a structured data collection process. This is stronger evidence of implementation than abstract project participation because it documents actual execution of a defined, stakeholder-facing study component.

Area IV: Evaluation

Evaluation is one of the strongest areas of alignment. Graduate coursework includes **PHC 6976 Health Services Plan/Eval**, **PHC 7935 Health Care Outcomes Measurement**, **PHC 6051 Biostatistics II**, **PHC 6053 Categorical Data Analysis**, **ECO 6424 Econometrics I**, **ECO 6425 Econometrics II**, **ECO 6936 Econometrics III**, **ECO 6936 Econometrics IV**, **QMB 6375 Applied Linear Statistical Models**, **QMB 7475 Introduction to Research Methods**, and **QMB 7516 Applied Multivariate Statistical Methods** . This provides strong formal preparation in evaluation design, data analysis, interpretation, and use of results.

The PCORI DCIS study is especially important here. It required construction of a preference-based Markov decision model comparing two competing health strategies, integration of clinical and patient-reported inputs, and sensitivity analyses to characterize uncertainty and robustness. More broadly, my research program includes longitudinal modeling of disease trajectories, decomposition of epidemiological trends into underlying components, and evaluation frameworks that distinguish statistical significance from policy-relevant effect size. These activities align directly with advanced evaluation competencies under HESPA III.

Area V: Research

Research competencies are strongly supported by graduate coursework and extensive applied experience. Relevant graduate training includes **PHC 7910 Directed Research**, **PHC 6977 Special Project: MPH**, **QMB 7475 Introduction to Research Methods**, and the graduate econometrics and statistics sequence listed above. This training supports the full research lifecycle, including study design, data analysis, interpretation, and dissemination.

My professional record includes more than 60 peer-reviewed publications and leadership roles in NIH-funded research programs focused on aging, multimorbidity, and Alzheimer's disease. The PCORI study also strengthens this area because it involved patient-centered comparative effectiveness

research, survey design, modeling, and multi-site coordination within a stakeholder-engaged framework.

Area VI: Advocacy

Advocacy competencies are demonstrated primarily through policy- and practice-relevant research dissemination. My work on disparities in AD/ADRD risk and outcomes is designed to support evidence-based policy and clinical decision-making. The PCORI DCIS study also provides important evidence here because the project explicitly engaged patients, clinicians, and other stakeholders in a comparative effectiveness framework intended to inform care decisions that matter directly to affected populations. That is closer to the advocacy intent of HESPA III than a generic publication record alone.

Additional advocacy evidence includes contributions to Duke and NIH-adjacent workshop activities aimed at improving methodological rigor in health disparities research, as well as teaching that emphasizes students' capacity to use evidence in decision environments where consequences are unequally distributed.

Area VII: Communication

Communication competencies are demonstrated through peer-reviewed publications, conference presentations, public-facing instructional delivery, editorial service, and stakeholder-oriented research communication. The three publicly archived workshop sessions provide verifiable evidence of communication to professional audiences. The PCORI DCIS study adds an especially important dimension here, because it required communication of study concepts and findings across patients, advocates, clinicians, and a multi-site research team, rather than only to technical academic audiences.

In teaching, I explicitly emphasize communication of analytic findings in forms legible to policy and management audiences, reinforcing this competency as a central professional skill rather than a secondary one.

Area VIII: Administration and Management

Graduate coursework supporting administrative competencies includes **PHC 6180 Health Services Management**, **PHC 6160 Health Care Financial Management**, and **PHC 6110 International Health/Health Care Systems**. These courses provide formal grounding in management, organization, and system-level decision-making.

Applied administrative and management experience includes coordination of multi-institutional NIH- and PCORI-funded research projects, supervision of trainees, participation in IRB processes, timeline and workflow management, and committee service. The PCORI DCIS study is especially relevant because it required coordination across multiple sites, structured integration of survey and modeling components, and management of a patient-centered comparative effectiveness design with multiple stakeholder groups.

Area IX: Ethics, Leadership, and Professionalism

Graduate coursework includes **PHC 6423 Health Care Law, Regulations, Ethics**. Undergraduate preparation also included formal philosophy and ethics coursework as part of a minor in Philosophy (University of South Florida, 2000), providing a foundation in ethical reasoning that predates and informs the applied research ethics practices described below. These competencies are further demonstrated through adherence to research ethics, data stewardship, transparent reporting practices, and explicit communication of methodological limitations. Leadership is reflected in progression to PI and MPI roles, mentorship of junior researchers, and sustained contributions to collaborative research environments. Professionalism is evidenced through scholarly productivity, editorial and peer-review service, invited teaching, and the expectation-setting role I occupy in research and instructional settings.

Summary

This profile demonstrates substantial equivalency with HESPA III competencies through a coherent graduate-level training foundation and extensive applied experience. The analytical core is supported by graduate coursework in biostatistics, econometrics, research methods, health services planning and evaluation, outcomes measurement, management, finance, and ethics. The PCORI-funded DCIS study is a critical source of applied evidence because it documents assessment, planning, implementation, evaluation, communication, advocacy, and management functions within a single stakeholder-engaged, multi-site project. Additional support comes from sustained teaching, NIH-funded research leadership, professional workshops, and service. Taken together, this combination of formal graduate training and documented applied experience supports eligibility to teach graduate-level coursework in evaluation, research methods, evidence-based decision-making, and data-driven health policy and practice.