

Curriculum Vitae

Michelle Denise Shardell, PhD

Professor, Institute for Genome Sciences, Department of Epidemiology and Public Health
Professor and Vice Chair for Research, Department of Epidemiology and Public Health
University of Maryland School of Medicine

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Contact Information

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Education

1995-1998 B.S. University of Florida, Mathematics (with High Honors)
1998-2000 M.S. University of Michigan School of Public Health, Biostatistics
2000-2005 Ph.D. Johns Hopkins University Bloomberg School of Public Health, Biostatistics
Dissertation: Analysis of Informatively Coarsened Discrete Time-to-Event Data

Accreditation

2022 Accredited Professional Statistician® (PStat®), American Statistical Association

Employment History

1998-2000 Research Assistant, Department of Biostatistics, University of Michigan School of Public Health
1999-2000 Research Assistant, Department of Ophthalmology, University of Michigan School of Medicine
2000-2005 Predoctoral Trainee, NIA Grant "The Epidemiology and Biostatistics of Aging" Johns Hopkins University Bloomberg School of Public Health
2002-2005 Research Assistant, Department of Biostatistics, Johns Hopkins University Bloomberg School of Public Health
2005-Present Associate, Department of Biostatistics, Johns Hopkins University Bloomberg School of Public Health
2005-2014 Assistant Professor, Department of Epidemiology and Public Health, University of Maryland School of Medicine
2014-2014 Associate Professor (with Tenure), Department of Epidemiology and Public Health, University of Maryland School of Medicine
2014-2019 Adjunct Associate Professor, Department of Epidemiology and Public Health, University of Maryland School of Medicine
2019-Present Professor, Institute for Genome Sciences, Department of Epidemiology and Public Health, University of Maryland School of Medicine
2020-Present Special Volunteer, Longitudinal Studies Section, Translational Gerontology Branch,

- 2023-Present Intramural Research Program, National Institute on Aging
Vice Chair for Research, Department of Epidemiology and Public Health, University of Maryland School of Medicine
- 2023-Present Co-Director, Biostatistics and Informatics Core, University of Maryland Claude D Pepper Older Americans Independence Center

Other Employment

- 1998 Statistical Programmer, Pediatric Oncology Group Statistical Office, Gainesville, Florida
- 2014-2019 Staff Scientist Statistician, Longitudinal Studies Section, Translational Gerontology Branch, Intramural Research Program, National Institute on Aging

Professional Society Memberships

- 2004-Present Member, International Biometric Society (Eastern North American Region)
- 2007-Present Member, 2017-Present Fellow, Gerontological Society of America
- 2009-Present Member, American Statistical Association
- 2023-Present Member, American Academy for the Advancement of Science

Honors and Awards

- 1996 Golden Key National Honor Society, University of Florida
- 1998 Phi Beta Kappa, University of Florida
- 1998 Graduation with High Honors, University of Florida
- 2004 Helen Abbey Award for excellence in teaching, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health
- 2004 Jane and Steve Dykacz Award for best student paper in medical statistics, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health
- 2006 Outstanding Teacher Award*, Department of Epidemiology and Preventive Medicine, University of Maryland; Baltimore, Maryland
** This award is selected by an independent student committee and is not influenced or directed by any faculty member.*
- 2008-2009 Scholar, Building Interdisciplinary Research Careers in Women's Health (BIRCWH), University of Maryland; Baltimore, Maryland
- 2009 Honorary University Shield, Faculty of Medicine, Al-Azhar University (oldest university in Egypt, founded 975 AD), Cairo, Egypt.
- 2009 Honorary Plaque of Recognition, Egyptian Medical Syndicate, (Dar Al Hekma), (Egypt's equivalent of the American Medical Association), for outstanding scientific contribution, Tanta Fever Hospital, Ministry of Health and Population, Egypt.
- 2009 Travel Award to attend the International Biometric Society / Eastern North American Region (ENAR) Workshop for Junior Researchers, San Antonio, Texas
- 2017 Fellow, Gerontological Society of America
- 2018 Summer Research Mentor Award, National Institutes of Health
- 2018 William G. Coleman Minority Health and Health Disparities Research Innovation Award, (with Dr. Nancy Chiles-Shaffer) National Institute on Minority Health and Health Disparities
- 2020 Strategic Initiatives Award for best proposal for "Developing the Next Generation of Biostatisticians," American Statistical Association Biometrics Section
- 2021 Elected to Council of Sections Governing Board, American Statistical Association

2021 Elected to Board of Directors, American Statistical Association
 2021 Elected Program Chair, American Statistical Association Statistics in Epidemiology Section

Administrative Service

Institutional Service

Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland

2002-2004 Biostatistics Student-Faculty Representative, Department of Biostatistics
 2002-2004 Co-Director, Biostatistics Student-Run Journal Club, Department of Biostatistics
 2003-2004 Facilitator, Biostatistics Teaching Assistant Training, Department of Biostatistics,

University of Maryland, Baltimore

2005-2006 Member, Graduate Comprehensive Exam Committee
 2005-2007 Founder and Coordinator, Statistical Genetics Journal Club
 2006-2014 Member, Graduate Program Committee
 2006-2008 Member, Research Committee
 2007-2010 Chair, Committee on Teaching Assistant Policy
 2008-2009 Member, Graduate Comprehensive Exam Committee
 2009 Member, Trudy Bush Award Selection Committee
 2009-2014 Member, Publications Committee for the Baltimore Hip Studies
 2009-2014 Member, Master of Public Health Curriculum Committee
 2010 Biostatistical Reviewer, University of Maryland College Park & University of Maryland Baltimore Seed Grant Program
 2010-2011 Member and Biostatistical Reviewer; Shock Trauma Center Research Committee; Shock, Trauma and Anesthesiology Research (STAR) Organized Research Center
 2010-2014 Representative, School of Medicine Council
 2011-2014 Member, Biostatistics Curriculum Committee
 2012-2014 Interviewer of Prospective PhD Students, Graduate Program in Life Sciences Doctoral Program in Epidemiology and Human Genetics
 2013-2014 Member, Graduate Comprehensive Exam Committee
 2014 Member, Mock Review (Grant Application) Committee
 2014 Member, Faculty Bioinformatician Search Committee; University of Maryland Greenebaum Cancer Center
 2014 Interviewer of Post-Doctoral Fellowship Applicants, Epidemiology of Aging T32 Fellowship
 2018-2019 Member, T32 Epidemiology of Aging External Advisory Committee
 2019-Present Member, T32 Epidemiology of Aging Oversight Committee
 2019-Present Member, Institute for Genome Sciences Campus Outreach Committee
 2020 Grader, Comprehensive Exam for Gerontology PhD program
 2021-Present Basic Science Faculty Representative Alternate, Executive Committee of the School of Medicine
 2023-Present Appointment, Promotion, and Tenure Committee, Institute for Genome Sciences
 2023 Moderator and Panelist, Institute for Genome Sciences “Take Your Child to Work Day” Career Panel
 2023 Organizer (with Chixiang Chen), Division of Biostatistics and Bioinformatics Annual

2023-Present	Retreat, Department of Epidemiology and Public Health Member, Division of Gerontology Faculty Search Committee, Department of Epidemiology and Public Health
2023-Present	Member, Strategic Plan Working Group for Research, University of Maryland School of Medicine
2023	Reviewer, UMB ICTR Voucher Program
2023-Present	Member, Bioinformatician/Computational Biology Faculty Search Committee, Institute for Genome Sciences and Center for Vaccine Development

National Institute on Aging (NIA)

2014, 2017	Ad Hoc Reviewer, Scientific Review Committee
2015-2016	Member, Baltimore Longitudinal Study on Aging Data Quality Control Committee
2015-2019	Member, Quantitative Science Interest Group Steering Committee
2016	Fellows Award for Research Excellence (FARE) Judge
2017-2019	NIA Intramural Research Program (IRP) Annual Retreat Poster Judge
2017-2019	Member, NIA Biomedical Data Science Network
2017	NIH Post-Baccalaureate Poster Day Poster Judge
2018-2019	Member, NIA Artificial Intelligence Working Group
2018-2019	Fellows Award for Research Excellence (FARE) Judge
2018-2019	Member, Longitudinal Studies Section Steering Committee
2019	Interviewer, Translational Gerontology Branch Tenure-Track Investigator Candidates

Local/National Service

2005-Present	<u>Ad hoc journal reviewer:</u> <i>American Journal of Clinical Nutrition</i> <i>American Journal of Epidemiology</i> <i>American Journal of Obstetrics & Gynecology</i> <i>American Journal of Tropical Medicine and Hygiene</i> <i>Annals of Epidemiology</i> <i>Annals of Internal Medicine</i> <i>Biometrics</i> <i>Biostatistics</i> <i>BMC Bioinformatics</i> <i>British Medical Journal</i> <i>Clinical Trials</i> <i>Computational Statistics and Data Analysis</i> <i>Dementia and Geriatric Cognitive Disorders</i> <i>Gerontologist</i> <i>International Journal of Epidemiology</i> <i>JAMA</i> <i>Journal of Aging and Health</i> <i>Journal of Alzheimer's Disease</i> <i>Journal of Applied Gerontology</i> <i>Journal of the American Geriatrics Society</i> <i>Journal of the American Statistical Association</i> <i>Journal of Biopharmaceutical Statistics</i> <i>Journal of Clinical Epidemiology</i>
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Journals of Gerontology: Series A (Biological Science)
Journals of Gerontology: Series A (Medical Science) (2-3 times per year)
Journal of the Royal Statistical Society: Series B (Statistical Methodology)
Journal of the Royal Statistical Society: Series C (Applied Statistics)
Medical Care
Nature Communications
Nutrition, Metabolism, and Cardiovascular Diseases
PLoS ONE
Psychological Methods
Rejuvenation Research
Statistical Science
Statistics in Medicine

2008-2013 Member of Data Safety Monitoring Board; R01 AG030141-01A1 “Improving Pain and Function in Hip Fracture” (PI, Sean R. Morrison)

2008 Chair, “Power/Sample Size.” Eastern North American Region of the International Biometric Society Annual Meeting; San Antonio, Texas.

2010 Chair, Symposium “Physical Activity among Vulnerable Older Adults: An Exploration of Potential Benefits and Barriers.” Gerontological Society of America Annual Meeting; New Orleans, Louisiana.

2010-2015 Associate Editor, *BMC Public Health*

2010-2022 Abstract Reviewer, Gerontological Society of America Annual Meeting

2011-2013 Regional Advisory Board Member, Eastern North American Region of the International Biometric Society

2011 Chair, “Research Methods.” Gerontological Society of America Annual Meeting; Boston, Massachusetts.

2012 Chair, Symposium “Missing Data in Aging Research: Challenges, Innovations, and Best Practices.” Gerontological Society of America Annual Meeting; San Diego, California.

2013 Ad hoc reviewer, Neurological, Aging, Musculoskeletal Epidemiology (NAME) NIH Study Section

2013 Chair, Symposium “Answering Causal Questions in Aging: Causal Inference in Practice.” Gerontological Society of America Annual Meeting; New Orleans, Louisiana.

2014 Chair, “Nutrition.” Gerontological Society of America Annual Meeting; Washington, DC.

2014-2016 Convener of the Measurement, Statistics, and Research Design Interest Group; Gerontological Society of America.

2016 Abstract Reviewer, International Association of Gerontology and Geriatrics (IAGG) World Congress of Gerontology and Geriatrics

2016 Chair, “Health Assessments” Gerontological Society of America Annual Meeting; New Orleans, Louisiana.

2017-Present Statistical Editor, *Seminars in Arthritis and Rheumatism*

2017-2019 Health Sciences Section Representative to the Mentoring Committee, Gerontological Society of America

2018-Present Member, Cardiovascular Health Study Geriatrics Working Group

2018-Present Member, Cross-Cohort Collaboration Working Group

2018 Chair, “Nutrition and Functional Status,” Gerontological Society of America Annual Meeting; Boston, Massachusetts.

2018 Discussant, “An Analytics Toolbox Facilitating Reproducible Interventional and Observational Science in Aging,” Gerontological Society of America Annual Meeting; Boston, Massachusetts.

2018 Mentor, “Mentoring Consultancies for Emerging Scholars,” Gerontological Society of America Annual Meeting; Boston, Massachusetts.

2018 Moderator, “Results and Positions on Lean Mass,” Sarcopenia Definitions and Outcomes Position Statements Conference; Boston, Massachusetts

2019-Present Statistical Reviewer, *JAMA Network Open*

2019 Participant and Mentor, Bench-to-Bedside Conference Series: Osteoporosis and Soft Tissue (Muscle/Fat) Disorders

2019 Mentor, “Mentoring Consultancies for Emerging Scholars,” Gerontological Society of America Annual Meeting; Austin, Texas.

2020-Present Member, Statistical Partnerships Among Academe, Industry, and Government Committee, American Statistical Association

2020 Health Sciences Section Fellows Review Board Member, Gerontological Society of America

2020 Volunteer, American Statistical Association Virtual Networking Session, Joint Statistical Meeting; virtual (originally scheduled for Philadelphia, Pennsylvania)

2020 Co-organizer, Topic-Contributed Session “Innovative Methods for Missing Data and Measurement Error in Health Research,” Joint Statistical Meetings; virtual (originally scheduled for Philadelphia, Pennsylvania)

2020 Chair, Symposium “Gut Microbiome in Older Men: Findings from the Osteoporotic Fractures in Men Study.” Gerontological Society of America Annual Meeting; virtual (originally scheduled for Philadelphia, Pennsylvania)

2020-2023 Byar Award Committee Member, Biometrics Section of the American Statistical Association

2020-Present Member & Checklist Validator, STrengthening the Organization and Reporting of Microbiome Studies (STORMS) Consortium (<https://www.stormsmicrobiome.org/>)

2021 Chair, Invited Session “Biostatistical Advances to Meet Challenges in Aging and Gerontology,” Eastern North American Region of the International Biometric Society Annual Meeting; virtual (originally scheduled for Baltimore, Maryland)

2021-Present Statistical Editor, *Journals of Gerontology Series A Biological Sciences*

2021 Reviewer, ZAG1 JIJ-3 NIH Special Emphasis Panel Study Section

2021 Organizer and Chair, Invited Paper Session “Advances in Longitudinal Methods in Research on Aging and Dementia from the MMethods for LOngitudinal Studies of DEMentia (MELODEM) Initiative,” Joint Statistical Meetings; virtual (originally scheduled for Seattle, Washington)

2021 Volunteer, American Statistical Association Virtual Networking Session, Joint Statistical Meeting; virtual (originally scheduled for Seattle, Washington)

2021-Present Young Investigator/Early Career Investigator Award Committee Member, Statistics in Epidemiology Section of the American Statistical Association

2022 Reviewer, ZAG1 ZIJ-P NIH Special Emphasis Panel Study Section

2022-Present Council of Sections Governing Board Representative (Elected), American Statistical Association

2022-Present Board of Directors Member (Elected), American Statistical Association

2022 Program Chair-Elect, American Statistical Association Statistics in Epidemiology Section

2022 Vice Chair, Statistical Partnerships Among Academe, Industry, and Government Committee, American Statistical Association

2022 Judge, American Statistical Association K-12 Data Visualization Poster Competition

2022 Reviewer, ZAG1 ZIJ-U NIH Special Emphasis Panel Study Section

2022 Member, Search Committee to hire a consulting organization to implement

- 2022 recommendations of the ASA Anti-Racism Task Force, American Statistical Association Reviewer, Analytics and Statistics for Population Research Panel A (ASPA) Study Section
- 2022 Chair, Symposium “Gerontologic Biostatistics: Merging with Data Science Toward Personalized Medicine,” Gerontological Society of America Annual Meeting; Indianapolis, Indiana
- 2023 Program Chair, American Statistical Association Statistics in Epidemiology Section
- 2023 Chair, Statistical Partnerships Among Academe, Industry, and Government Committee, American Statistical Association
- 2023 Reviewer, Pilot Review Panel, Interventional Studies in Aging Center at Hebrew SeniorLife Institute for Aging Research, Harvard Medical School
- 2023 Panelist, Patient-Centered Outcomes Research Institute Merit Review Panel (Cycle 3, Healthy Aging)
- 2023 Methods Consultant, Network for Investigation of Delirium Unifying Scientists (NIDUS) II Pilot Award RFA
- 2023 Member, American Statistical Association Board of Directors Subcommittee to review naming of a new award
- 2023 Organizer, Invited Paper Session “Strengthening our Community through Impactful Multi-Sector Data-Driven Collaborations,” Joint Statistical Meetings; Toronto, Ontario, Canada
- 2023 Chair, Symposium “Epidemiologic Geroscience Innovations at the Nexus of Reproductive Aging and Women’s Health,” Gerontological Society of America Annual Meeting; Tampa, FL
- 2023 Organizer and Moderator, ASA Statistical Partnerships among Academe, Industry, and Government (SPAIG) Committee Fall Webinar on Industry and Government Internships

International Service

- 2005 Participant, Curriculum Development Workshop, College of Health Sciences, American University of Armenia; Yerevan, Armenia.
- 2014-Present Member, Methods for Longitudinal Studies of Dementia (MELODEM) Initiative
- 2016 Abstract Reviewer, International Association of Gerontology and Geriatrics (IAGG)
- 2020 Grant Reviewer, Swiss National Science Foundation

Teaching Service

Medical Student Teaching

- 2011-2013 Lecturer for Foundations of Disease Course, Lecture titles: “Biostatistical Inference I and II”, “Regression”, and “Survival Analysis”
University of Maryland School of Medicine
Average 160 second-year medical students, 4.0 contact hours/year
- 2020 Invited Lecturer for the Program for Research Initiated by Students and Mentors (PRISM) Medical Student Summer Research Program, Lecture title: “Biostatistics in Biomedical Research: Introduction to P-values and Multiple Comparisons,” University of Maryland School of Medicine
57 first-year UM medical students, 2.0 contact hours/year

2020 Invited Lecturer for the Summer Program in Obesity, Diabetes, and Nutrition Research Program (SPORT), Lecture title: “Biostatistics in Biomedical Research: Introduction to P-values and Multiple Comparisons,” Department of Medicine, University of Maryland School of Medicine
12 medical students, 2.0 contact hours/year

Graduate Education

2001-2004 Teaching Assistant for multiple courses, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health
25-300 graduate students, 2-5 contact hours/week, 8 weeks/course

2002 Lead Teaching Assistant for 140.621-622 “Statistical Methods in Public Health I & II,” Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health
Average 300 graduate students, 4 contact hours/week for 16 weeks

2002-2003 Robert Wood Johnson Teaching Assistant for 140.621-624 “Statistical Methods in Public Health I-IV,” Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health
9 Robert Wood Johnson Fellows, 2 contact hours/week for 32 weeks

2003-2004 International Lecturer for Biostatistics I and II “Inferential Biostatistics” and “Biostatistical Modeling,” Department of General Practice and Primary Health Care, University of Helsinki, Finland
25 graduate students, 16 contact hours/week for 8 weeks

2005 Visiting Assistant Professor for Biostatistics II “Biostatistics Modeling and Sampling,” College of Health Sciences, American University of Armenia, Yerevan, Armenia
25 graduate students, 15 contact hours/wk for 4 weeks

2005-2010 Instructor for 140.611-612 “Statistical Reasoning in Public Health I and II,” Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health Average 80 graduate and transient students, 18 contact hours/wk for 3 weeks

2006-2010 & 2012-2014 Course Master for PREV 720 “Statistical Methods in Epidemiology,” Department of Epidemiology and Public Health, University of Maryland School of Medicine
Required course for the PhD Epidemiology program, the PhD Gerontology program Epidemiology track, the MS Epidemiology program, the MS Clinical Research program, and the MPH Epidemiology Concentration
Average 25 graduate students/class, 4-5 contact hours/week for 16 weeks/year

2009-Present Invited Lecturer for GERO/PREV 681 “Epidemiology of Aging,” Lecture title: “Proxy Respondents in Aging Research,” Department of Epidemiology and Public Health, University of Maryland School of Medicine
Required course for PhD Gerontology program
Average 10 graduate students/class, 1.5 contact hours/year

- 2010 Course Master for PREV/PH 621 “Introduction to Biostatistics,” Department of Epidemiology and Public Health, University of Maryland School of Medicine
Required course for MPH Global Health concentration and MPH Community & Population Health concentration
36 on-site graduate students, 5 web-based graduate students, 4 contact hours/week for 16 weeks/year
- 2020-Present Invited Lecturer for GPLS 716 “Genomics and Bioinformatics,” Lecture title: “Introduction to P-values and Multiple Comparisons,” Graduate Program in Life Sciences, University of Maryland School of Medicine
Required course for PhD students in Molecular Medicine (Genome Biology track)
Average 24 graduate students/class, 3.0 contact hours/year
- 2020-Present Invited Lecturer for PREV 780 “Molecular Epidemiology,” Lecture title: “Statistical Issues in Molecular Epidemiology,” Graduate Program in Life Sciences, University of Maryland School of Medicine
Required course for PhD students in Epidemiology (Molecular Epidemiology track)
Average 9 graduate students/class, 2.0 contact hours/year
- 2024-Present Faculty Mentor for PREV 747 “Research Practicum,” Graduate Program in Life Sciences, University of Maryland School of Medicine
Required course for PhD students in Epidemiology
Mentor for 1 graduate student, 25 contact hours/year

Postdoctoral Scholars

- 2023 Invited Lecturer for Grant Writing Class, Lecture title: “Specific Aims,” Office of Postdoctoral Scholars, University of Maryland School of Medicine
Class designed for students/fellows planning to submit a grant
Average 29 students/class, 1.0 contact hours/year

Undergraduate Education and Outreach

- 2020 Invited Lecturer for the Nathan Schnaper Intern Program in Translational Cancer Research (NSIP), Lecture title: “Biostatistics in Biomedical Research: Introduction to P-values and Multiple Comparisons,” University of Maryland Marlene and Stewart Greenebaum Comprehensive Cancer Center
18 undergraduate summer interns, 2.0 contact hours/year
- 2020 Invited Lecturer for the University of Maryland Summer Scholars Program, Lecture title: “Biostatistics in Biomedical Research: Introduction to P-values and Multiple Comparisons,” University of Maryland, Baltimore
23 UM College Park sophomores and juniors, 2.0 contact hours/year

High School and Community College Outreach

- 2021 Invited Lecturer for the Pathways to Technology Early College High School (P-TECH) Program at Paul Laurence Dunbar High School, Lecture title: “Introduction to Careers in Biostatistics,” Paul Laurence Dunbar High School, Baltimore

53 P-TECH Dunbar High School sophomore students, 0.5 contact hours/year

- 2021 Invited Lecturer for the University of Maryland, Baltimore (UMB) Continuing Umbrella of Research Experiences (CURE) Scholars Program, Lecture title: “Introduction to Careers in Biostatistics,” University of Maryland, Baltimore
30 High school Sophomore and junior UMB CURE Scholars from West Baltimore, 1.0 contact hour/year
- 2021 Invited Lecturer for the University of Maryland, Baltimore (UMB) Continuing Umbrella of Research Experiences (CURE) Scholars Program, Lecture title: “Internship Opportunities in Biostatistics,” University of Maryland, Baltimore
30 High school Junior and Senior UMB CURE Scholars from West Baltimore, 1.0 contact hour/year
- 2023 Invited Lecturer for the University of Maryland, Baltimore (UMB) Institute for Genome Sciences Summer Intern Program, Lecture title: “Introduction to Careers in Biostatistics,” University of Maryland, Baltimore
10 High school Interns, 1.0 contact hour/year
- 2023 Invited Lecturer for the University of Maryland, Baltimore (UMB) Institute for Genome Sciences Summer Intern Program, Lecture title: “Introduction to P-Values,” University of Maryland, Baltimore
10 High school Interns, 1.0 contact hour/year

Thesis Committees

M.S. and Ph.D. Thesis Committees

(All are students from Department of Epidemiology and Public Health, University of Maryland, Baltimore, unless indicated otherwise)

- 2006 *Member*, Jian Ye, Ph.D.
2006-2008 *Member*, Hua Ling, Ph.D.
2007-2008 *Member*, Kerri Thom, M.D., M.S. (K23 Awardee)
2005-2008 *Member*, Fatma Shebl, M.B.B.Ch, Ph.D.
2006-2008 *Member*, Daniel Andersen, Ph.D.
2006-2009 *Member*, Shayna Rich, M.D./Ph.D. (F31 Awardee)
2006-2009 *Member*, Kristen Kreisel, Ph.D.
2007-2009 *Member*, Marin Schweizer, Ph.D.
2007-2010 *Member*, Julia Chan, Ph.D.
2007-2010 *Co-Chair*, Christopher D’Adamo, Ph.D.
2007-2013 *Member*, Maya Matheny, Ph.D.
2010-2012 *Member*, Aaron Hess, M.D./Ph.D.
2011-2013 *Member*, Ying Tang, Ph.D.
2011-2014 *Member*, Lisa Reider, Ph.D.
2019-2023 *Member & Dean’s Representative*, Christina Stennett, Ph.D. (NIH R36 Awardee)
2019-2022 *Member & Dean’s Representative*, DeeDee Ismail, Ph.D.
2020-2021 *Member & Dean’s Representative*, Rashmita Bajracharya, Ph.D.
2021-Present *Member*, Bing Guo, Ph.D. candidate
2021-2024 *Member*, Sarah Robbins, Ph.D. candidate (NIH F31 Awardee)

2021-Present	<i>Member & Dean's Representative, Jennifer Kirk, Ph.D. candidate</i>
2022-Present	<i>Member, Bern Monari, Ph.D candidate, Department of Microbiology and Immunology</i>
2022-Present	<i>Member, Rhea Mehta, Ph.D. candidate</i>
2023-Present	<i>Chair, Aman Shreshra, Ph.D. candidate</i>
2023-Present	<i>Co-Chair, Anam Ahmad, M.D./Ph.D. candidate</i>

M.P.H. Faculty Advisor

2012-2014	Nkem Nonyel, PharmD/MPH student, Community and Population Health Concentration
2013-2014	Brian Normile, DDS/MPH student, Epidemiology Concentration
2013-2014	Modanat Lawal, MPH student, Community and Population Health Concentration
2013-2014	Amber Makowski, MPH student, Community and Population Health Concentration

Other Advisees/Mentees

2010-2011	Dawn Ally, NIH BIRCWH K12 Mentored Career Development Award Recipient (Statistical Mentor), Assistant Professor, Department of Epidemiology and Public Health, University of Maryland, Baltimore
2010-2014	Kerri Thom, NIH K23 Mentored Career Development Award Recipient (Statistical Mentor), Assistant Professor, Department of Epidemiology and Public Health, University of Maryland, Baltimore
2010-2014	Daniel Morgan, AHRQ K08 Mentored Career Development Award Recipient (Statistical Mentor), Assistant Professor, Department of Epidemiology and Public Health, University of Maryland, Baltimore
2014-2017	Alan Rathbun, NIH T32 Epidemiology of Aging Post-Doctoral Fellow, Department of Epidemiology and Public Health, University of Maryland, Baltimore
2015-2017	Shabnam Salimi, NIH T32 Epidemiology of Aging Post-Doctoral Fellow, Department of Epidemiology and Public Health, University of Maryland, Baltimore
2017-Present	Alan Rathbun, Rheumatology Research Foundation Scientist Development Award Recipient (Committee Chair) and NIH K01 Recipient (Statistical Mentor), Assistant Professor, Department of Epidemiology and Public Health, University of Maryland, Baltimore
2021-Present	Johanna Holm, NIH K01 Mentored Career Development Award Recipient (Statistical Mentor), Assistant Professor, Institute for Genome Sciences, University of Maryland, Baltimore
2021-Present	Jason Falvey, NIH Paul Beeson K76 Mentored Career Development Award Recipient (Statistical Mentor), Assistant Professor, Department of Physical Therapy, University of Maryland, Baltimore
2022-Present	Jenny Pena Dias, NIH K01 Mentored Career Development Award Recipient (Statistical Mentor), Instructor, Division of Endocrinology, Diabetes and Metabolism, Johns Hopkins University School of Medicine
2022-2023	Charlotte Ravel, Institute for Genome Sciences Summer Internship Program (Mentor), Undergraduate Student, University of Maryland, College Park
2023-Present	Joanna-Lynn Borgogna, NIH K99/R00 MOSAIC Pathway to Independence Award Recipient (Co-Sponsor and Statistical Mentor), Postdoctoral Fellow, Montana State University
2024-Present	Kayla Carter, NIH F32 Postdoctoral Award Recipient (Co-Sponsor and Statistical Mentor), Postdoctoral Fellow, University of Maryland, Baltimore

Grant Support

Active Grants

- 9/1/20-5/31/24 (Subcontract Principal Investigator: 2%) PI: J Mammen
Mechanisms of Hypothalamic-Pituitary-Thyroid Axis Aging (R01)
NIH/JHU (R01 AG064256)
Annual Direct Costs: \$23,897
Total Direct Costs: \$47,794
- 8/15/21-6/30/26 (Co-Director of the Biostatistics and Informatics Core: 2%) PI: J Magaziner/L Katzel/A
Ryan
University of Maryland Claude D Pepper Older Americans Independence Center (UM-
OAIC) (P30)
NIH/National Institute on Aging (P30 AG028747)
Annual Direct Costs: \$714,534
Total Direct Costs: \$3,572,670
- 9/01/21-8/31/26 (Contact Principal Investigator: 21%) with MPI R. Brotman
Methods to Test the Role of Age-Related Lifestyle, Vaginal Microenvironment Changes
and the Prevention, Treatment, and Progression of Genitourinary Syndrome of Aging
(R01)
NIH/National Institute on Aging (R01 AG069915)
Annual Direct Costs: \$576,321
Total Direct Costs: \$2,881,605
- 06/01/22-5/31/26 (Biostatistician/Co-Investigator: 2%) MPI: R Brotman/J Ravel
Cervicovaginal microbiome, mucosal immunity, and pathogen factors that contribute to
spontaneous clearance of Chlamydia trachomatis (R01)
NIH/NIAID (R01 AI167629)
Annual Direct Costs: \$578,153
Total Direct Costs: \$2,980,752
- 08/18/22-6/30/25 (Principal Investigator: 21%)
Statistical Models and Mechanisms Linking Biomarkers of Aging to Cognitive-Physical
Decline and Dementia (R01)
NIH/NINDS (RF1 NS128360)
Annual Direct Costs: \$562,423
Total Direct Costs: \$1,687,269
- 09/02/22-6/30/27 (Principal Investigator: 25%)
Statistical Methods for Kidney Markers as Shared Determinants of Dementia and
Physical Disability in Older Adults (R01)
NIH/National Institute on Aging (R01 AG048069 Competitive Renewal)
Annual Direct Costs: \$576,338
Total Direct Costs: \$2,841,505

02/27/23-08/31/27 **(Principal Investigator: 21%)**
Methods to Test Biomarkers of Aging as Shared Determinants of Alzheimer's Disease
and Related Dementias and Physical Disability (R01)
NIH/NIA (R01 AG079854)
Annual Direct Costs: \$481,420
Total Direct Costs: \$2,394,242

5/1/23-4/30/28 (Faculty Mentor/Oversight Committee: No effort) PI: D Orwig/A Gruber-Baldini
Research Training in the Epidemiology of Aging
NIH/National Institute on Aging (T32 AG000262)
Annual Direct Costs: \$513,478
Total Direct Costs: \$2,567,390

Pending Grants

04/01/24-3/31/29 **(Biostatistician/Co-Investigator: 3.5%)** PI: S. Tuddenham
Factors associated with Refractory and Early Recurrent Bacterial Vaginosis (R01)
NIH/NIAID
Annual Direct Costs: \$78,936
Total Direct Costs: \$394,682

02/01/24-1/31/25 **(Biostatistician/Co-Investigator: 5%)** PI: J. Magaziner/C. Chen
Enhancing Statistical Methods for Identifying High-Risk Cohorts and Facility-Level
Factors Associated with Poor Post-Fracture Recovery Among Older Adults living with
ADRD
NIH/NIA
Annual Direct Costs: \$214,199
Total Direct Costs: \$214,199

07/01/24-06/30/29 **(Biostatistician/Co-Investigator: 10%)** PI: Chen
Developing a Novel Analytical Toolbox to Tackle Multifaceted Statistical Challenges in
Analyzing Medicare-linked data for Older Adults living with ADRD
NIH/NIA
Annual Direct Costs: \$400,365
Total Direct Costs: \$2,001,825

09/01/24-8/31/29 **(Biostatistician/Co-Investigator: 5%)** PI: Choi Site PI: McCoy
Target Trial Emulation for Comparative Effectiveness and Safety of SGLT2 in Gout
Patients with Heart Failure
NIH/NIAMS
Annual Direct Costs: \$188,767
Total Direct Costs: \$943,835

09/01/24-8/31/29 **(Principal Investigator: 25%)**
Academic Leadership Award: Training Program in Gerontologic Biostatistics
NIH/NIA
Annual Direct Costs: \$148,559

Total Direct Costs: \$742,797

- 11/01/24–10/31/30 **(Biostatistician/Co-Investigator: 5%)** PI: Stafford
Botswana-Maryland Initiative for Neuroscience and Dementia research (B-MIND)
Collaborative
NIH/NIA
Annual Direct Costs: \$552,598
Total Direct Costs: \$3,315,590
- 12/01/24–11/30/29 **(Biostatistician/Co-Investigator: 5%)** PI: McCoy
Effectiveness and Safety of Intensive Glycemic Control in Type 2 Diabetes in the Era of
Modern Pharmacotherapies
NIH/NIDDK
Annual Direct Costs: \$505,388
Total Direct Costs: \$2,526,939
- 12/01/24–11/30/26 **(Biostatistician/Co-Investigator: 5%)** PI: Chen
A Novel Analytical Framework for Identifying Influential Comorbidity Clusters in Post-
Fracture Recovery Trajectories among Older Adults Living with Alzheimer's Disease
and Related Dementias
NIH/NIA
Annual Direct Costs: \$136,903
Total Direct Costs: \$273,808

Completed Grants

- 7/1/01-6/30/02 (Biostatistician) PI: C. Simpson
Factors Influencing Outcomes for Older African American Women with Asthma
American Federation of Aging Research
Total Costs: \$55,000
- 9/1/01-8/31/08 (Co-Investigator/Biostatistician) PI: J. Magaziner/J. Yu-Yahiro
Determinants of Recovery from Hip Fracture (Bone Metabolism)
NIH/National Institute on Aging (R01 AG018668)
Annual Direct Costs: \$133,350
Total Direct Costs: \$2,281,816
- 9/30/01-5/31/09 (Co-Investigator/Biostatistician) PI: M. Baumgarten
Locus of Care & Pressure Ulcers after Hip Fracture
NIH/National Institute of Arthritis and Musculoskeletal and Skin Diseases
(R01 AR47711)
Annual Direct Costs: \$593,721
Total Direct Costs: \$3,261,525
- 3/1/05-2/28/10 (Co-Investigator/Biostatistician) PI: A. Harris
Epidemiology of Imipenem-Resistant *P. aeruginosa*
NIH/National Institute of Allergy and Infectious Diseases (R01 AI060859)
Annual Direct Costs: \$125,000
Total Direct Costs: \$500,000

- 3/1/07-2/29/16 (Co-Investigator/Biostatistician) PI: J. Magaziner/M. Hochberg
Epidemiology of Bone Strength and Muscle Composition after Hip Fracture in Men
NIH/National Institute on Aging (R01 AG029315)
Annual Direct Costs: \$815,091
Total Direct Costs: \$2,994,863
- 1/1/08-12/31/09 **(BIRCWH Scholar)** PI: P. Langenberg
Maryland's Organized Research Effort in Women's Health
NIH/Eunice Kennedy Shriver National Institute of Child Health and Human
Development (Building Interdisciplinary Research Careers in Women's Health
[BIRCWH] K12 HD043489)
Annual Direct Costs: \$459,970
Total Direct Costs: \$2,300,239
- 5/1/08-4/30/13 (Biostatistician) PI: R. Miller
Consequences of Inflammation on Muscle Following Hip Fracture
NIH/National Institute on Aging (K23 AG027746)
Annual Direct Costs: \$160,928
Total Direct Costs: \$804,640
- 6/1/10-5/31/14 (Co-Investigator/Biostatistician) PI: A. Harris
Epidemiology of Emerging Pathogens among Hospitalized Patients
NIH/National Institute of Allergy and Infectious Diseases (R01 AI060859)
Annual Direct Costs: \$116,325
Total Direct Costs: \$486,793
- 7/26/10-7/25/12 (Co-Investigator/Biostatistician) PI: J. Furuno
Using Nursing Home Antibigrams to Improve Antibiotic Prescribing and Delivery
Agency for Healthcare Research & Quality (HHS A290200600020I)
Annual Direct Costs: \$221,616
Total Direct Costs: \$432,232
- 9/1/10-5/31/19 (Co-Investigator/Biostatistician) PI: J. Magaziner/R. Craik
Community Ambulation Following Hip Fracture
ClinicalTrials.gov Identifier: NCT01783704
NIH/National Institute on Aging (R01 AG035009)
Annual Direct Costs: \$2,110,410
Total Direct Costs: \$10,050,364
- 4/1/11-3/31/15 **(Principal Investigator)**
Statistical Methods to Correct for Proxy Bias in Studies of Older Adults
NIH/National Institute on Aging (K25 AG034216)
Annual Direct Costs: \$121,977
Total Direct Costs: \$371,140
- 9/1/11-5/31/18 (Co-Investigator/Biostatistician) PI: J. Magaziner
Effects of Multi-Modal Exercise Intervention Post Hip Fracture
NIH/National Institute on Aging (R37 AG009901)
Annual Direct Costs: \$641,149

Total Direct Costs: \$2,992,029

- 8/1/12-4/30/18 **(Principal Investigator for subcontract)** PI: G. Hicks
Chronic Low Back Pain in Older Adults: The Role of Co-Existing Hip Impairments
NIH/ National Institute on Aging (R01 AG041202) (University of Delaware)
Annual Direct Costs: \$304,874
Total Direct Costs: \$1,555,575
- 7/1/13-10/31/17 (Co-Investigator/Biostatistician) PI: A. Harris
Use of Electronic Data to Improve Risk Adjustment for Hospital Infection Rates
Agency for Healthcare Research & Quality (R01 HS022291)
Annual Direct Costs: \$321,476
Total Direct Costs: \$907,193
- 7/1/13-6/30/15 (Co-Investigator/Biostatistician) PI: R. Brotman
Vaginal Microbiota, Immune Responses, and Vulvovaginal Symptoms during
Menopause
NIH/National Institute of Allergy and Infectious Diseases (R21 AI107224)
Annual Direct Costs: \$125,000
Total Direct Costs: \$275,000
- 9/30/13-9/29/16 (Co-Investigator/Biostatistician) PI: K. Thom/S. Cosgrove
Impact of Post-Antibiotic Prescription Review on Antibiotic Use and Resistance: A
Multi-Site Cluster-Randomized Crossover Trial
Centers for Disease Control (CDC)
Annual Direct Costs: \$363,750
Total Direct Costs: \$1,091,250
- 9/1/14-8/31/18 (Biostatistician) PI: R Semba
Systemic Complement and Age-Related Macular Degeneration (R01)
NIH/National Eye Institute (R01 EY024596) (Johns Hopkins University)
Annual Direct Costs: \$15,388
Total Direct Costs: \$56,905
- 5/1/15-4/30/23 (Biostatistician/Co-Investigator: 5%) PI: R Brotman
Longitudinal Study of the Vaginal Microbiome Prior to Incident STI (R01)
NIH/National Institute of Allergy and Infectious Disease (R01 AI116799) (University of
Maryland)
Annual Direct Costs: \$490,450
Total Direct Costs: \$2,500,000
- 9/30/15-4/30/22 **(Principal Investigator)**
Statistical Methods for Vitamin D Targets for Functional Outcomes in Older Adults
(R01)
NIH/National Institute on Aging (R01 AG048069)
Annual Direct Costs: \$301,260
Total Direct Costs: \$1,217,760
- 9/30/15-12/31/18 (Biostatistician) PI: R Semba

Oxidative Stress and the Pathogenesis of Sarcopenia and Disability in Older Women (R01)

NIH/National Institute on Aging (R01 AG027012) (Johns Hopkins University)

Annual Direct Costs: \$250,000

Total Direct Costs: \$725,000

9/30/15-6/30/18

(Biostatistician) PI: S. Bhasin/P. Cawthon

Muscle Mass and Strength Cut-Points Associated with Mobility Limitation in Older Adults (U01)

NIH/National Institute on Aging (U01 AG051421) (Harvard University)

3/23/18-9/7/18

(Principal Investigator)

Addressing Disparities in Optimal Vitamin D Levels for Functional Outcomes in Older Adults

2018 NIMHD William G. Coleman, Jr., Ph.D. Minority Health and Health Disparities Research Innovation Award

NIH/National Institute on Minority Health and Health Disparities

Annual Costs: \$15,000

Total Costs: \$15,000

4/1/18-3/31/23

(Content Expert: No effort) PI: D. Mungas

Conference on Advanced Psychometric Methods in Cognitive Aging Research (R13)

NIH/National Institute on Aging (R13 AG030995) (University of California at Davis)

Annual Direct Costs: \$50,000

Total Direct Costs: \$250,000

9/30/20-8/31/21

(Contact Principal Investigator) with MPI R. Brotman

Methods to Test Lifestyle, Vaginal Microenvironment and Genitourinary Symptoms across Menopause Transition (R56)

NIH/National Institute on Aging (R56 AG068673)

Annual Direct Costs: \$569,876

Total Direct Costs: \$569,876

1/1/20-12/31/21

(Principal Investigator)

Introducing Biostatistics to Diverse Pathways in Technology Early College (P-TECH) Students Through Microbiome Data Analysis

American Statistical Association Biometrics Section

Annual Direct Costs: \$3,000

Total Direct Costs: \$3,000

8/1/20-6/30/22

(Multiple Principal Investigator) Contact PI: J. Magaziner

Claude D. Pepper Older Americans Independence Center Supplement (P30)

NIH/National Institute on Aging (P30 AG028747-15S1)

Annual Direct Costs: \$249,911

Total Direct Costs: \$249,911

2/11/21-2/28/24

(Biostatistician/Co-Investigator) PI: S. Tuddenham

The Rectal Microbiome and Incident Rectal Sexually Transmitted Infections (R21)

NIH/JHU (R21 AI156765)
Annual Direct Costs: \$210,244
Total Direct Costs: \$420,488

03/01/21-2/29/24 **(Principal Investigator)**
Epidemiology of the Inverse Comorbidity of Dementia and Cancer: Statistical Methods
and Biological Mechanisms (R03)
NIH/National Institute on Aging (R03 AG070178)
Annual Direct Costs: \$100,000
Total Direct Costs: \$200,000

12/2/22-12/1/23 **(Principal Investigator: No effort)**
Aging, diabetes, and statistical methods for the genitourinary microbiome
University of Maryland, Baltimore (UMB) Institute for Clinical & Translational
Research (ICTR) Program
Annual Direct Costs: \$5,000
Total Direct Costs: \$5,000

Completed Contracts

05/01/07-06/30/12 (Biostatistician) PI: C. Quinn
Evaluation of a Patient-Provider Diabetes Management Software (RCT)
ClinicalTrials.gov Identifier: NCT01107015
WellDoc Communications, Inc
Annual Direct Costs: \$273,632
Total Direct Costs: \$1,245,010

12/1/07-11/30/08 (Principal Investigator for subcontract) PI: E. Braver
Effects of Airbags Certified as Advanced and Compliant with FMVSS 208 on Driver
Deaths and Frontal Crashed
Insurance Institute for Highway Safety
Annual Direct Costs: \$98,157
Total Direct Costs: \$98,157

1/4/09-1/31/14 (Principal Investigator for subcontract) PI: E. Perencevich
Improving Practice: Automated Compliance Monitoring in Infection Control
Veterans Administration (VA 1I01HX000107) (University of Iowa)
Annual Direct Costs: \$187,200
Total Direct Costs: \$561,600

2/1/10-9/30/12 (Biostatistician) PI: D. Alley
Diagnosis of Clinically Important Weakness in Older Adults: The InCHIANTI Study
FNIH
Annual Direct Costs: \$34,782
Total Direct Costs: \$62,500

2/1/10-1/31/11 (Biostatistician) PI: C. Quinn
Cellular Glucose Meter for Diabetes Compliance
Maryland Industrial Partnerships

Annual Direct Costs: \$119,672
Total Direct Costs: \$119,672

4/1/10-3/31/11 (Biostatistician) PI: C. Quinn
Cellular Glucose Meter for Diabetes Compliance
TelCare LLC
Annual Direct Costs: \$33,334
Total Direct Costs: \$33,334

9/15/10-9/14/12 (Biostatistician) PI: A. Harris
Effect of the Use of Universal Glove and Gowning on Healthcare Associated Infection
Rates and Antibiotic Resistant Bacteria
ClinicalTrials.gov Identifier: NCT01318213
Agency for Healthcare Research & Quality (HHS A290200600015i)
Annual Direct Costs: \$486,990
Total Direct Costs: \$973,980

7/01/11-3/31/12 (Biostatistician) PI: D. Morgan
Centers for Medicare & Medicaid Services and Non-Payment of Catheter-Associated
Urinary Tract Infections
Society for Healthcare Epidemiology of America
Annual Direct Costs: \$47,732
Total Direct Costs: \$47,732

09/21/20 – 9/20/21 (**Principal Investigator: 26%**)
Interagency Personnel Agreement
NIH IPA (6204557)
Annual Direct Costs: \$59,132
Total Direct Costs: \$59,132

Publications

Peer-Reviewed Journal Articles (*denotes statistical mentor for student, fellow, trainee, or junior researcher)

1. Simpson CF, Punjabi NM, Wolfendon L, **Shardell M**, Shade DM, Fried LP. Relationship between lung function and physical function in disabled older women. *Journal of Gerontology A, Biological Sciences Medical Sciences*, 2005 60:350-354. PMID: 15860473 (*oversaw data analysis*)
2. Miller RR, Cappola A, **Shardell M**, Yu-Yahiro J, Hawkes W, Hebel RJ, Magaziner J. Persistent changes in interleukin-6 and lower extremity function following hip fracture. *Journal of Gerontology A, Biological Sciences Medical Sciences*, 2006 61:1053-1058. PMID: 17077198 (*planned and performed data analysis, wrote part of the paper*)
3. Resnick B, Orwig D, Hawkes W, **Shardell M**, Golden J, Werner-Bronzert M, Magaziner J. The relationship between psychosocial state and exercise behavior of older women two months post hip fracture. *Rehabil Nurs.*, 2007 32:139-149. PMID: 17650781 (*wrote part of the paper*)
4. Resnick B, Orwig D, Yu-Yahiro J, Hawkes W, **Shardell M**, Hebel JR, Zimmerman S, Golden J, Werner M, Magaziner J. Testing the effectiveness of the exercise plus program in older women post-hip fracture. *Ann Behav Med.*, 2007 34:67-76. PMID: 17688398 (*wrote part of the paper*)

5. Resnick B, Orwig D, D'Adamo C, Yu-Yahiro J, Hawkes W, **Shardell M**, Golden J, Zimmerman S, Magaziner J. Factors that influence exercise activity among women post hip fracture participating in the exercise plus program. *Clinical Interventions in Aging*, 2007 2:413-427. PMID: 18044192 PMCID: 2685262 (*wrote part of the paper*)
6. **Shardell M**, Scharfstein D, Bozzette SA. Survival curve estimation for informatively coarsened discrete event-time data. *Statistics in Medicine*, 2007 26:2184-2202. PMID: 16998829 (*developed biostatistical methods and wrote the paper*)
7. **Shardell M**, Harris AD, El-Kamary SS, Furuno JP, Miller RR, Perencevich EN. Statistical analysis and application of quasi experiments to antimicrobial resistance intervention studies. *Clinical Infectious Diseases*, 2007 45:901-907. PMID: 17806059 (*wrote the paper, performed simulation study analysis, note: this paper is part of the curriculum of EPI502 "Epidemiology and Biology of Antibiotic Resistance" at the Harvard School of Public Health*)
8. Kamal SM, El Kamary SS, **Shardell MD**, Nasser I, Muhammadi M, Baky AA, Moustafa A, Iman Fathy, Ahmed A, Moniem M, Mansour H, Naggat KE. The role of rapid and early virologic response in determining peginterferon alfa-2b/ribavirin therapy duration in patients with chronic hepatitis C genotype 4. *Hepatology*, 2007 46:1732-1740. PMID: 17943989 (*planned and performed the data analysis, wrote part of the paper*)
9. Miller RR, Hicks GE, **Shardell M**, Cappola A, Hawkes W, Yu-Yahiro J, Keegan A, Magaziner J. Association of serum vitamin D levels with inflammatory response following hip fracture - The Baltimore Hip Studies. *Journal of Gerontology A, Biological Sciences Medical Sciences*, 2007 62:1402-406. PMID: 18166692 (*planned and oversaw data analysis, wrote part of the paper*)
10. **Shardell M**, Miller RR. Weighted estimating equations for longitudinal studies with death and non-monotone missing time-dependent covariates and outcomes. *Statistics in Medicine*, 2008 27:1008-1025. PMID: 17579923 PMCID: 2792882 (*developed biostatistical methods and wrote the paper*)
11. Schneider MG, **Shardell M**. Parkinson's disease and functional decline in older Mexican Americans. *Parkinsonism & Related Disorders*, 2008 14:397-406. PMID: 18343181 (*planned and performed data analysis, wrote part of the paper*)
12. Hicks GE, **Shardell M**, Miller RR, Bandinelli S, Guralnik J, Cherubini A, Lauretani F, Ferrucci L. Associations between vitamin D status and pain in older adults: The InCHIANTI study. *Journal of the American Geriatrics Society*, 2008 56:785-791. PMID: 18331295 PMCID: 2645670 (*planned and performed data analysis, wrote part of the paper*)
13. Miller RR, **Shardell MD**, Hicks GE, Cappola AR, Hawkes WG, Yu-Yahiro JA, Magaziner J. Association of interleukin-6 with lower extremity function following hip fracture-the role of muscle mass and strength. *Journal of the American Geriatrics Society*, 2008 56:1050-1056. PMID: 18410321 PMCID: 2801424 (*planned and oversaw data analysis, wrote part of the paper*)
14. Hirshon JM, **Shardell M**, Alles S, Powell JL, Squibb K, Ondov J, Blaisdell CJ. Elevated ambient air zinc increases pediatric asthma morbidity. *Environmental Health Perspectives*, 2008 116:826-831. PMID: 18560541 PMCID: 2430241 (*planned and performed data analysis, wrote part of the paper*)
15. Lenze EJ, **Shardell M**, Ferrell RE, Orwig D, Yu-Yahiro J, Hawkes W, Fredman L, Miller R, Magaziner J: Association of serotonin-1A and 2A receptor promoter polymorphisms with depressive symptoms and functional recovery in elderly persons after hip fracture. *Journal of Affective Disorders*, 2008 111:61-96. PMID: 18334271 PMCID: 2610462 (*planned and performed data analysis, wrote part of the paper*)
16. Hicks GE, Gaines JM, **Shardell M**, Simonsick EM. Associations of back and leg pain with health status and functional capacity of older adults: Findings from the Retirement Community Back Pain Study. *Arthritis Rheum*, 2008 59:1306-1313. PMID: 18759261 (*oversaw data analysis, wrote part of the paper*)
17. Schweizer ML*, Furuno JP, Harris AD, McGregor JC, Thom KA, Johnson JK, **Shardell MD**, Perencevich EN. Clinical utility of infection control documentation of prior history of Methicillin-

- resistant *Staphylococcus aureus* colonization or infection. *Infect Control Hosp Epidemiol*, 2008 29:972-974. PMID: 18793097 PMCID: 2853911 (*mentored the student, oversaw the data analysis*)
18. **Shardell M**, Scharfstein DO, Vlahov D, and Galai N. Inference for cumulative incidence functions with informatively coarsened discrete event-time data. *Statistics in Medicine*, 2008 27:5861-5879. PMID: 18759370 PMCID: 2796438 (*developed biostatistical methods, wrote the paper*)
 19. **Shardell M**, Scharfstein DO, Vlahov D, and Galai N. Sensitivity analysis using elicited expert information for inference with coarsened data: Illustration of censored discrete event times in ALIVE. *American Journal of Epidemiology*, 2008 168:1460-1469. PMID: 18952850 PMCID: 2732953 (*developed biostatistical methods, wrote the paper*)
 20. Perencevich EN, McGregor JC, **Shardell M**, Furuno JP, Harris AD, Morris JG, Fisman DN, Johnson JA. Summer peaks in gram-negative bacterial infections among hospitalized patients. *Infect Control Hosp Epidemiol*, 2008 29:1124-1131. PMID: 19031546 (*planned and performed data analysis, wrote part of the paper*)
 21. Resnick B, D'Adamo C, **Shardell M**, Orwig D, Hawkes W, Hebel JR, Golden J, Magaziner J, Zimmerman S, Yu-Yahiro J. Adherence to an exercise intervention among older women post hip fracture. *J Clinical Sport Psychology* 2008 2:41-56. PMID: 20428489 PMCID: 2859720 (*interpreted the data*)
 22. Thom K, **Shardell M**, Osih R, Schweizer M, Furuno J, Perencevich E, McGregor J, Harris A. Impact of controlling for severity of illness at different time points. *Infect Control Hosp Epidemiol*, 2008 29:1048-1053. PMID: 18817505 PMCID: 2716043 (*helped plan data analysis*)
 23. **Shardell M**, Hicks GE, Miller RR, Kritchevsky S, Andersen D, Bandinelli S, Cherubini A, Ferrucci L. Association of low vitamin D levels with the frailty syndrome in men and women. *Journal of Gerontology A, Biological Sciences Medical Sciences*, 2009 64:69-75. PMID: 19164273 PMCID: 2691187 (*conceived the research question, planned and performed the data analysis, wrote the paper*)
 24. Rich SE*, **Shardell M**, Margolis D, Baumgarten M. Pressure ulcer preventive device use among elderly patients early in the hospital stay. *Nursing Research*, 2009 58:95-104. PMID: 19289930 PMCID: 2832670 (*mentored the student, oversaw the data analysis*)
 25. **Shardell MD**, El-Kamary SS. Calculating sample size for studies with expected all-or-none nonadherence and selection bias. *Biometrics*, 2009 65:635-639. PMID: 18759830 PMCID: 4319571 (*developed biostatistical methods and wrote the paper*)
 26. Baumgarten M, Margolis DJ, Seleko J, Moye N, Jones PS, **Shardell M**. Validity of pressure ulcer diagnosis using digital photography. *Wound Repair and Regeneration*, 2009 17:287-290. PMID: 19320898 PMCID: 2839538 (*performed the data analysis*)
 27. Baumgarten M, Margolis DJ, Orwig DL, **Shardell MD**, Hawkes WG, Langenberg P, Palmer MH, Jones PS, McArdle PF, Sterling R, Kinoshian BP, Rich SE, Sowinski J, Magaziner J. Pressure ulcers in elderly hip fracture patients across the continuum of care. *Journal of the American Geriatrics Society*, 2009 57:863-870. PMID: 19484841 PMCID: 3382012 (*planned the data analysis, wrote part of the paper*)
 28. Baumgarten M, **Shardell M**, Rich S. Methodologic issues in studies of the effectiveness of pressure ulcer prevention interventions. *Advances in Skin & Wound Care*, 2009 22:180-188. PMID: 19325278 PMCID: 2841287 (*wrote part of the paper*)
 29. El-Kamary S, **Shardell MD**, Abdel-Hamid M, Ismail S, El-Ateek M, Metwally M, Mikhail N, Hashem M, Mousa A, Aboul-Fotouh A, El-Kassas M, Esmat G, Strickland GT. A randomized controlled clinical trial to assess the safety and efficacy of Silymarin on symptoms, signs and biomarkers of acute hepatitis. *Phytomedicine*, 2009 16:391-400. PMID: 19303273 PMCID: 2733865 (*planned and performed the data analysis, wrote part of the paper*)
 30. Quinn CC, Gruber-Baldini AL, **Shardell M**, Weed K, Clough SS, Peeples M, Terrin M, Bronich-Hall L, Barr E, Lender D. Mobile diabetes intervention study: Testing a personalized treatment/behavioral communication intervention for blood glucose control. *Contemporary Clinical Trials*, 2009 30:334-346. PMID: 19250979 (*designed the analytical plan for the study, wrote part of the paper*)

31. Miller RR, Ballew S, **Shardell MD**, Hicks GE, Hawkes WG, Resnick B, Magaziner J. Repeat falls and the recovery of social participation in the year post hip fracture. *Age and Ageing*, 2009 38:570-575. PMID: 19586976 PMCID: 2981467 (*planned the data analysis, wrote part of the paper*)
32. **Shardell M**, El-Kamary SS. Sensitivity analysis of informatively coarsened data using pattern mixture models. *Journal of Biopharmaceutical Statistics*, 2009 19:1018-1038. PMID: 20183462 PMCID: 3727411 (*developed biostatistical methods, wrote the SAS software code included in the appendix, wrote the paper [note: this was an invited paper]*)
33. Royak-Schaler R, Gardner L, **Shardell M**, Zhan M, Passmore SR, Gadalla SM, Hoy MK, Tkaczuk KHR, Nesbitt K. Evidence-based care for breast-cancer survivors: Communicating the Institute of Medicine Guidelines in medical practice. *Patient Education and Counseling*, 2009 77:413-420. PMID: 19883985 (*planned and oversaw the data analysis, wrote part of the paper*)
34. Baumgarten M, Margolis D, Orwig D, Hawkes W, Rich S, Langenberg P, **Shardell M**, Palmer MH, Mc Ardle P, Sterling R, Jones PS, Magaziner J. Use of pressure-redistributing support surfaces among elderly hip fracture patients across the continuum care: adherence to prevention guidelines. *Gerontologist*, 2010 50:253-262. PMID: 19587108 PMCID: 2838408 (*helped plan the data analysis, wrote part of the paper*)
35. Kreisel K*, Roghmann MC, **Shardell M**, Stine OC, Perencevich E, Lesse A, Gordin F, Climo M, Johnson JK. Assessment of the 48-hour rule for identifying community-associated methicillin-resistant *Staphylococcus aureus* infections complicated by bacteremia. *Infect Control Hosp Epidemiol*, 2010 31:657-659. PMID: 20412012 (*mentored the student, oversaw the data analysis*)
36. **Shardell M**, Hicks GE, Miller RR, Langenberg P, Magaziner J. Pattern-mixture models for analyzing normal outcome data with proxy respondents. *Statistics in Medicine*, 2010 29:1522-1538. PMID: 20535763 PMCID: 3010385 (*developed biostatistical method, wrote the paper; note: this paper is part of the curriculum of STAT 9240 "Bayesian Inference" at the Department of Biostatistics & Epidemiology Medical College of Georgia*)
37. Braver ER, **Shardell M**, Teoh ER. How have changes in air bag designs affected frontal crash mortality? *Annals of Epidemiology*, 2010 20:499-510. PMID: 20538193 (*planned the data analysis, wrote part of the paper*)
38. Milaneschi Y, **Shardell M**, Corsi A, Vazzana R, Bandinelli S, Guralnik JM, Ferrucci L. Serum 25-hydroxyvitamin D and depressive symptoms in older women and men. *Journal of Clinical Endocrinology and Metabolism*, 2010 29:1522-1538. PMID: 20444911 PMCID: 2928895 (*helped plan the data analysis, wrote part of the paper*)
39. **Shardell M**, Hicks GE, Miller RR, Magaziner J. Semiparametric Regression Models for Repeated Measures of Mortal Cohorts with Non-Monotone Missing Outcomes and Time-Dependent Covariates. *Statistics in Medicine* 2010 29:2282-2296. PMID: 20564729 PMCID: 3731632 (*developed biostatistical method, wrote the paper*)
40. Schweizer ML*, Furuno JP, Harris AD, Johnson JK, **Shardell MD**, McGregor JC, Thom KA, Sakoulas G, Perencevich EN. Empiric therapy for *Staphylococcus aureus* bacteremia may not reduce in-hospital mortality. *PLoS One*, 2010 5:e11432. PMID: 20625395 PMCID: 2896397 (*mentored student, oversaw the data analysis, helped revise the paper*)
41. Kreisel KM*, Johnson JK, Stine OC, **Shardell MD**, Perencevich EN, Lesse AJ, Gordin FM, Climo MW, Roghmann MC. Illicit drug use and risk of USA300 methicillin-resistant *Staphylococcus aureus* infections complicated by bacteremia. *Emerging Infectious Diseases*, 2010 16:1419-1427. PMID: 20735927 PMCID: 3294968 (*mentored student, oversaw the data analysis*)
42. Rich SE*, Margolis D, **Shardell M**, Hawkes WG, Miller RR, Amr S, Baumgarten M. Frequent manual repositioning and incidence of pressure ulcers among bedbound elderly hip fracture patients. *Wound Repair and Regeneration* 2011 19:10-18. PMID: 21134034 PMCID: 3059225 (*mentored the student, oversaw the data analysis*)

43. Rich SE*, **Shardell M**, Hawkes WG, Margolis DJ, Amr S, Miller R, Baumgarten M. Pressure-redistributing support surface use and pressure ulcer incidence in elderly hip fracture patients. *J American Geriatrics Society* 2011 59:1052-1059. PMID: 21649630 PMCID: 3601674 (*mentored the student, oversaw the data analysis*)
44. Schweizer ML*, Furuno JP, Sakoulas G, Johnson JK, Harris AD, **Shardell MD**, McGregor JC, Thom KA, Perencevich EN. Increased mortality with accessory gene regulator (agr)-dysfunction in *Staphylococcus aureus* among bacteremic patients. *Antimicrob Agents Chemother* 2011 55:1082-1087. PMID: 21173172 PMCID: 3067101 (*mentored the student, oversaw the data analysis*)
45. Orwig D, Hochberg M, Yu-Yahiro J, Resnick B, Hawkes WG, **Shardell M**, Hebel JR, Colvin P, Miller RR, Golden J, Zimmerman S, Magaziner J. Delivery and outcomes of a year-long RCT evaluating a home-exercise program after hip fracture. *Archives of Internal Medicine* 2011 171:323-331. PMID: 21357809 PMCID: 3140167 (*helped plan and perform the data analysis, wrote part of the paper*)
46. Hicks GE, **Shardell M**, Alley DE, Miller RR, Bandinelli S, Guralnik J, Lauretani F, Simonsick EM, Ferrucci L. Absolute strength and loss of strength as predictors of mobility decline in older adults: the InChianti Study. *Journal of Gerontology A, Biological Sciences Medical Sciences* 2012 67:66-73. PMID: 21546582 PMCID: 3260485 (*planned and performed the data analysis, wrote part of the paper*)
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170. Cawthon PM, Manini T, Patel SM, Newman A, Travison T, Kiel DP, Santanasto AJ, Ensrud KE, Xue, Q-L, **Shardell M**, Duchowny K, Erlandson KM, Pencina KM, Fielding RA, Magaziner J, Kwok T, Karlsson M, Ohlsson C, Mellstrom D, Hirani V, Ribom E, Correa-de-Araujo R, Bhasin S. Putative cut-points in sarcopenia components and incident adverse-health outcomes: an SDOC analysis, *Journal of*

- the American Geriatrics Soc* 2020 68:1429-37. PMID: 32633824 PMCID: 7508260 (**contributed to the analytic design, served as statistical advisor and consultant, interpreted the data**)
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176. Borgogna JC,* **Shardell MD**, Grace SG, Santori EK, Americus B, Li Z, Ulanov A, Forney L, Nelson TM, Brotman RM, Ravel J, Yeoman CJ. Biogenic amines increase the odds of bacterial vaginosis and affect the growth of lactic acid production by vaginal *Lactobacillus* spp. *Appl Environ Microbiol* 2021 87:e03068-20. PMID: 33674429 PMCID: 8117770 (**mentored the junior faculty, oversaw the analysis, edited the paper for content**)
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65. Cawthon PM, **Shardell M**, McLean RR, Kenny A, Peters KW, Dam TL, Castaneda-Sceppa C, Studenski S. Cut-points for low appendicular lean mass that identify older adults with clinically significant weakness. *Gerontologist* 2013 53:594-594.
66. Alley D, **Shardell M**, Cawthon PM, Dam TL, Fragala M, Kenny A, McLean RR, Studenski S. Cut-points in grip strength for the clinical definition of slowness with weakness. *Gerontologist* 2013 53:595-595.
67. Brotman RM, **Shardell M**, Pawel G, Fadrosch D, Chang K, Silver M, Viscidi RP, Burke AE, Ravel J, Gravitt PE. Association between the vaginal microbiota, menopause status and signs of vulvovaginal atrophy. *Menopause* 2013 20:1318-1318.
68. **Shardell M**. Addressing and leveraging seasonality of serum 25-hydroxyvitamin D concentrations in observational aging research. *Gerontologist* 2014 54:380-380.
69. **Shardell M**, Semba R, Kalyani R, Bandinelli S, Chia CW, Ferrucci L. Prospective association of plasma klotho with bone health: Findings from the InCHIANTI Study. *Gerontologist* 2015 55 (Suppl 2): NP.
70. **Shardell M**, Semba R, Kalyani R, Bandinelli S, Chia CW, Ferrucci L. Prospective association of plasma klotho with the frailty syndrome: Findings from the InCHIANTI Study. *Gerontologist* 2015 55 (Suppl 2): NP.

71. Fabbri E*, Chiles-Shaffer N*, Gonzalez-Freire M*, **Shardell M**, Zoli M, Studenski S, Ferrucci L. Body composition, but not BMI, predicts longitudinal decline in muscle quality in older men and women from the Baltimore Longitudinal Study of Aging. *Gerontologist* 2015 55 (Suppl 2): 319-320.
72. Chiles-Shaffer N*, Fabbri E*, Ferrucci L, **Shardell M**, Studenski S. Discriminant validity of muscle quality indicators in the Baltimore Longitudinal Study of Aging. *Gerontologist* 2015 55 (Suppl 2): 283.
73. Salimi S*, **Shardell M**, Miller R, Gruber-Baldini AL, Orwig D, Rathbun AM, Yerges-Armstrong L, Hochberg MC. Association of tumor necrosis factor alpha receptor with trajectories of bone turnover markers in older adults with hip fracture. *Gerontologist* 2015 55 (Suppl 2): NP.
74. Rathbun AM*, **Shardell M**, Orwig D, Gruber-Baldini AL, Johnson R, Hochberg MC, Magaziner J. The impact of depression on physical performance following hip fracture. *Gerontologist* 2015 55 (Suppl 2): 88.
75. Rathbun AM*, Stuart E, **Shardell M**, Yau M, Hochberg M. Estimating the impact of depressive symptoms on osteoarthritis pain using marginal structural models: data from the Osteoarthritis Initiative. *Osteoarthritis and Cartilage* 2016 24:S199-S199.
76. Rathbun AM*, Yau M, **Shardell M**, Stuart E, Hochberg M. Depressive symptoms and structural disease progression in knee osteoarthritis: data from the Osteoarthritis Initiative. *Osteoarthritis and Cartilage* 2016 24:S214-S215.
77. Semba RD, Zhang P, Zhu M, Geng-Spyropoulos M, **Shardell M**, Gonzalez-Freire M, Eriksdottir G, Gudnason V, Van Eyk JE, Ferrucci L. A novel, multiplexed targeted mass spectrometry assay for quantification of complement factor H (CFH) variants and CFH-related proteins 1-5 in human plasma. *Immunobiology* 2016 221:1201-1201.
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79. **Shardell M**, Colpo M, Bandinelli S, Ferrucci L. Longitudinal 25-hydroxyvitamin D and depressive symptoms with structural models: The InCHIANTI Study. *Gerontologist* 2016 56 (Suppl 3): 438.
80. Rathbun AM*, **Shardell M**, Gruber-Baldini A, Orwig D, Hicks G, Stuart EA, Hochberg MC, Magaziner J. Time-varying effect of cumulative depressive symptoms on physical performance following hip fracture. *Gerontologist* 2016 56 (Suppl 3): 61.
81. Salimi S*, **Shardell M**, Huang Y, Gruber-Baldini A, Miller R, Guralnik J, Orwig D, Magaziner J. TNFalphaR-1 and frailty in men and women after hip fracture: findings from the Baltimore Hip Studies. *Gerontologist* 2016 56 (Suppl 3): 177.
82. **Shardell M**, Kalyani R, Semba RD, Bandinelli S, Varadhan R, Ferrucci L. Plasma klotho, adiposity, and insulin resistance in older adults: findings from the InCHIANTI Study. *Innovation in Aging* 2017 1 (suppl 1): 8.
83. **Shardell M**. Combining shared parameter models with structural models to overcome death bias in aging research. *Innovation in Aging* 2017 1 (suppl 1): 19.
84. **Shardell M**. Addressing unmeasured confounding in vitamin D research in older adults. *Innovation in Aging* 2018 2 (suppl 1): 812-813.
85. Rathbun AM*, Gallo JJ, Stuart EA, **Shardell M**, Gruber-Baldini AL, Orwig D, Ryan A, Magaziner J. Depressive symptom subtypes in older adults after hip fracture. *Innovation in Aging* 2018 2 (suppl 1): 510.
86. Adelnia F*, **Shardell M**, Bergeron C, Fishbein K, Spencer R, Reiter D, Ferrucci L. Skeletal muscle perfusion in post-exercise hyperemia in young and old adults as assessed by diffusion-weighted MRI. *Innovation in Aging* 2018 2 (suppl 1): 103.
87. Osawa Y*, Chiles Shaffer N*, **Shardell M**, Studenski S, Ferrucci L. Age-associated changes in peak torque and body composition: association with mobility decline. *Innovation in Aging* 2018 2 (suppl 1): 95.

88. Borgogna JL*, Santori EK, Nelson TM, Ravel J, **Shardell MD**, Gravitt P, Brotman RM, Yeoman CJ. HPV is associated with an altered metabolomic profile in the vaginal tract. *American Journal of Obstetrics and Gynecology* 2018 219:636-636.
89. Rathbun A*, Magaziner J, **Shardell M**, Beck T, Yerges-Armstrong L, Orwig D, Hicks G, Salimi S, Ryan A, Hochberg M. Differences in geometric strength at the contralateral hip between men with hip fracture and non-fractured comparators. *Journal of Bone and Mineral Research* 2018 33:395-396.
90. Adelnia F*, Urbanek J, Osawa Y, **Shardell M**, Simonsick EM, Schrack JA, Ferrucci L. The association between moderate-to-vigorous physical activity and muscle oxidative capacity in older adults. *Innovation in Aging* 2019 3 (suppl 1):84.
91. Simonsick EM, Moore AZ, **Shardell M**, Shaffer NC, Tanaka T. The Baltimore Longitudinal Study of Aging: opportunities for research on women's health and aging. *Innovation in Aging* 2019 3 (suppl 1):355.
92. Levine ME, Kuo P, Schrack J, Simonsick EM, Resnick S, **Shardell M**, Ferrucci L. Systems-level modeling of biological and molecular aging changes over time. *Innovation in Aging* 2019 3 (suppl 1):579.
93. Schrack JA, Kuo P-L*, Simonsick EM, Resnick SM, Levine M, **Shardell M**. Trajectories of phenotypic markers of aging as precursors to functional change. *Innovation in Aging* 2019 3 (suppl 1):579.
94. Kuo P-L*, Levine M, **Shardell M**, Resnick S, Simonsick EM, Schrack JA. Longitudinal change of physical and cognitive functions in BLSA. *Innovation in Aging* 2019 3 (suppl 1):579.
95. **Shardell M**, Kuo P-L*, Schrack J, Simonsick EM, Resnick SM, Levine ME, Ferrucci L. Analytical considerations of developing a phenotypic aging measure: the conceptual framework must come first. *Innovation in Aging* 2019 3 (suppl 1):579.
96. **Shardell M**, Langsetmo L, Demmer R. Gut microbiome in older men: findings from the Osteoporotic Fractures in Men Study. *Innovation in Aging* 2020 4 (suppl 1):839.
97. **Shardell M**, Parimi N, Langsetmo L, Orwoll E, Shikany J, et al. Comparing analytical methods for gut microbiome and aging: gut microbiota and body weight in the MrOS. *Innovation in Aging* 2020 4 (suppl 1):839.
98. Kuo P-L*, **Shardell M**, Schrack JA, Levine M, Simonsick EM, Ferrucci L. Metrics of phenotypic aging from the energetics perspective. *Innovation in Aging* 2020 4 (suppl 1):143.
99. **Shardell M**, Gravitt P, Ravel J, Burke A, Brotman R. Association of vaginal microbiota with the genitourinary syndrome of menopause across reproductive stages. *Innovation in Aging* 2020 4 (suppl 1):171.
100. Kuo P-L, Levine M, Schrack J, **Shardell M**, Ferrucci L. Longitudinal profiling in phenotypic metric of aging. *Innovation in Aging* 2021 5 (suppl 1):5.
101. Bajracharya R, Guralnik J, Magaziner J, **Shardell M**, Rathbun A, Yamashita T, Orwig D. Sex differences in all-cause and infection-specific mortality over 10 years post hip fracture. *Innovation in Aging* 2021 5 (suppl 1):165.
102. Moore A, **Shardell M**, Kuo P-L, Karikkineth A, Ferrucci L, Simonsick E. Fatigability: an early marker of diminished renal function. *Innovation in Aging* 2021 5 (suppl 1):208.
103. Guralnik J, Simonsick E, Kritchevsky S, Cawthon P, **Shardell M**. Sex-specific 25-hydroxyvitamin D threshold concentrations for functional outcomes in older adults. *Innovation in Aging* 2021 5 (suppl 1):471.
104. **Shardell M**, Murphy T. Gerontologic biostatistics: merging with data science and toward personalized medicine. *Innovation in Aging* 2022 6 (suppl 1):177.
105. Mehta R, **Shardell M**, Ryan A, Dong Y, Beamer B, Hochberg M, Rathbun A. Association of persistent depressive symptoms with physical activity in knee osteoarthritis. *Innovation in Aging* 2022 6 (suppl 1):710.
106. Reeves A, Lopez O, **Shardell M**, Odden M. The role of reproductive aging for Alzheimer's disease and related dementias in the cardiovascular health study. *Innovation in Aging* 2023 7 (suppl 1):437.

107. Stennett C, Gravitt P, Brotman R, **Shardell M**. Cervical “inflamm-aging” and genitourinary syndrome of menopause: a geroscience case-control study. *Innovation in Aging* 2023 7 (suppl 1):436.
108. Mehta R, **Shardell M**, Ryan A, Dong Y, Beamer B, Hochberg M, Rathbun A. The mediating role of pain severity in the association between depressive symptoms and gait speed. *Innovation in Aging* 2023 7 (suppl 1):757.
109. Robbins S, **Shardell M**, Beitelshes A, Miller R, Ravel J, Taylor S, Brotman R. Association of diabetes and vaginal microbiota with the genitourinary syndrome of menopause. *Innovation in Aging* 2023 7 (suppl 1):437.
110. **Shardell M**, Robbins S, Borgogna JL, Stennett C, Yeoman C, Burke A, Ravel J, Brotman R. Associations of urinary conditions with vaginal microbiota and metabolites across reproductive stages. *Innovation in Aging* 2023 7 (suppl 1):436.
111. Chen C, Shen B, Falvey J, **Shardell M**, Ren H. A new method to identify Medicare claims-based factors associated with post-acute recovery in older adults with ADRD. *Innovation in Aging* 2023 7 (suppl 1):978-9.
112. **Shardell M**, Rathbun A, Gruber-Baldini A, Guralnik J, Golden J, Kapogiannis D, Simonsick E. Epidemiology of the inverse comorbidity of dementia and cancer: the challenge of survival bias. *Innovation in Aging* 2023 7 (suppl 1):491.
113. Oberdier M, Zampino M, **Shardell M**, AlGhatrif M, Lakatta E, Simonsick E, Ferrucci L. Red blood cell distribution width: what can it tell us? *Innovation in Aging* 2023 7 (suppl 1):1108-9.
114. Falvey J, Chen C, Johnson A, Ryan K, **Shardell M**, Ren H, Reider L, Magaziner J. Days spent at home before and after hip fracture among Medicare beneficiaries living with dementia: a cohort study. *Innovation in Aging* 2023 7 (suppl 1):403.
115. **Shardell M**. Epidemiologic geroscience innovations at the nexus of reproductive aging and women’s health. *Innovation in Aging* 2023 7 (suppl 1):436.

Major Invited Speeches

Local

1. Anxiety and Functional Decline in Disabled Older Community-Dwelling Women: Exploratory Results and an Analysis Plan (with Simpson CF), *Geriatric Grand Rounds*, The Johns Hopkins Medical Institute Geriatrics Center, Baltimore, Maryland; 2003.
2. Sensitivity Analysis for Informatively Interval-Censored Discrete Failure-Time Data, Department of Epidemiology and Preventive Medicine, University of Maryland, Baltimore, Maryland; 2004.
3. Analyzing Longitudinal Data with Death, Drop-out, and Intermittent Nonresponse: Baltimore Hip Studies 3, Department of Epidemiology and Preventive Medicine, University of Maryland, Baltimore; 2006.
4. Biostatistical Methods and Reasoning, Research Ethics Training Program in Egypt, University of Maryland, Baltimore; 2006.
5. Biostatistical Methods and Reasoning, Research Ethics Training Program in Egypt, University of Maryland, Baltimore; 2007.
6. Analysis with Missing Data, T32 Training Program in the Epidemiology of Aging, University of Maryland, Baltimore; 2007.
7. Basics in Biostatistics, Research Ethics Training Program in Egypt, University of Maryland, Baltimore; 2008.
8. Biostatistical Methods and Reasoning, Research Ethics Training Program in Egypt, University of

- Maryland, Baltimore; 2008.
9. Basics in Biostatistics, Research Ethics Training Program in Egypt, University of Maryland, Baltimore; 2009.
 10. Biostatistical Methods and Reasoning,” Research Ethics Training Program in Egypt; University of Maryland, Baltimore; 2009.
 11. Vitamin D and Transitions in Frailty, Division of Gerontology, Department of Epidemiology and Preventive Medicine, University of Maryland, Baltimore; 2010.
 12. Joint Effects of Physical Activity and Vitamin D on Longevity: NHANES III, Division of Gerontology, Department of Epidemiology and Public Health, University of Maryland, Baltimore; 2011.
 13. Doubly Robust Estimation and Causal Inference in Longitudinal Studies with Dropout and Truncation by Death, Division of Biostatistics and Bioinformatics, Department of Epidemiology and Public Health, University of Maryland, Baltimore; 2013.
 14. Hierarchical Clustering in –Omics Research. National Institute on Aging; Baltimore, Maryland; 2014.
 15. Addressing Mortality in Longitudinal Studies of Older Adults. National Institutes of Health Research Festival; Bethesda, Maryland; 2014.
 16. Addressing Mortality in Longitudinal Studies of Older Adults. National Institute on Aging; Baltimore, Maryland; 2014.
 17. Proteomic Epidemiology. National Institute on Aging; Baltimore, Maryland; 2014.
 18. Introduction to Counterfactual Thinking in Epidemiology. National Institute on Aging; Baltimore, Maryland; 2015.
 19. Creativity and Innovation in Epidemiology Research. National Institute on Aging; Baltimore, Maryland; 2015.
 20. Fuzzy C-Means Clustering. National Institute on Aging; Baltimore, Maryland; 2015.
 21. Quantitative Science: Biostatistics and Epidemiology of Aging, National Institute on Aging; Baltimore, Maryland; 2015
 22. Analyzing data from iTRAQ experiments. National Institute on Aging; Baltimore, Maryland; 2016.
 23. Panel Discussant, Careers in Aging Panel Discussion. University of Maryland Baltimore County; Baltimore, Maryland; 2017.
 24. Working with the Baltimore Longitudinal Study on Aging: Challenges and Guidelines. Longitudinal Studies Section National Institute on Aging; Baltimore, Maryland; 2017.
 25. Working with the Baltimore Longitudinal Study on Aging: Challenges and Guidelines. National Institute on Aging; Baltimore, Maryland; 2017.
 26. Negative Confounding in Observational Epidemiology. National Institute on Aging; Baltimore, Maryland; 2018.
 27. Meta-Analysis Methods in Proteomics Data Analysis. National Institute on Aging; Baltimore, Maryland; 2018.
 28. Proteomics and Vitamin D in the InCHIANTI Study. National Institute on Aging; Baltimore, Maryland; 2018.
 29. Addressing Unmeasured Confounding in Vitamin D Research. National Institute on Aging; Baltimore, Maryland; 2018.
 30. Vitamin D and Inflammation. National Institute on Aging; Baltimore, Maryland; 2018.
 31. PProject on Optimal VItamin D in the Elderly: A Pooled Cohort Analysis. National Institute on Aging; Baltimore, Maryland; 2019.
 32. Methods for Overcoming Bias from Truncation by Death and Selective Survival in Studies of Older Adults. National Institute on Aging; Baltimore, Maryland; 2019.
 33. Sex-specific 25-hydroxyvitamin D threshold concentrations for functional outcomes in older adults: Project on Optimal Vitamin D in Older Adults (PROVIDO). Claude D. Pepper Executive Advisory Board Meeting; virtual (originally scheduled for University of Maryland Baltimore); 2021.
 34. Tips and Best Practices for Leveraging Secondary Data for Aging Research. UMB/UMBC Gerontology

- Program Aging Forum; virtual; 2021.
35. Introduction to P-values and the Multiple Comparisons Debate. IGS Campus Outreach Committee Seminar. Institute for Genome Sciences, University of Maryland School of Medicine; Baltimore, Maryland; 2022.
 36. Current Biostatistics Research in Aging. University of Maryland Baltimore Claude D. Pepper Center Meeting; University of Maryland Baltimore; 2023.
 37. Five Pro Tips for Successful Biostatistics Grant Writing. Division of Biostatistics and Bioinformatics, University of Maryland School of Medicine; Baltimore, Maryland; 2023.

National

1. Sensitivity Analysis for Informatively Interval-Censored Discrete Failure-Time Data, Center for Statistical Science, Brown University, Providence, Rhode Island; 2004.
2. Managing Missing Data in Behavior Change Research, Society of Behavioral Medicine, Washington, DC; 2007.
3. Analysis of Informatively Coarsened Data: A Sensitivity Analysis Approach,” FDA/Industry Statistics Workshop sponsored by the American Statistical Association, Arlington, Virginia; 2008.
4. Associations of 25(OH)D Levels with Decline and Recovery from the Prefrail State: The InChianti Study, Gerontological Society of America Annual Meeting, Atlanta, Georgia; 2009.
5. Using Elicited Expert Information in Studies of HIV Risk Factors: The AIDS Link to the Intravenous Experience (ALIVE) Study, New York City Department of Health and Mental Hygiene Grand Rounds, New York, New York; 2010.
6. Joint Effects of Physical Activity and Vitamin D on Longevity: NHANES III, Gerontological Society of America Annual Meeting, New Orleans, Louisiana; 2010.
7. Causal Inference in Observational Aging Research, Department of Biostatistics, Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland; 2012.
8. Biomarkers Consortium: Statistical Methods for Defining Sarcopenia (with DE Alley), Sarcopenia Consensus Summit, Baltimore, Maryland; 2012.
9. Addressing Missing Data using Proxy Reports Subject to Misclassification, Gerontological Society of America Annual Meeting, San Diego, California; 2012.
10. Proxy Respondents to Evaluate Health Status in Patients with Hip Fracture: Challenges, Opportunities, and Lessons (with A Jones), Gerontological Society of America Annual Meeting; San Diego, California; 2012.
11. Doubly Robust Estimation and Causal Inference in Longitudinal Studies with Dropout and Truncation by Death, University of Maryland School of Public Health; College Park, Maryland; 2013.
12. Causal Inference in Studies of Older Adults with Dropout and Death: Vitamin D and Gait Speed in InChianti, Gerontological Society of America Annual Meeting; New Orleans, Louisiana; 2013.
13. Causal Inference in Studies of Older Adults with Dropout and Death: Vitamin D and Gait Speed in InChianti, Translational Gerontology Branch, National Institute on Aging; Baltimore, Maryland; 2013.
14. Vitamin D, “Anti-Aging” Hormone Klotho, and Functional Outcomes in Older Adults, University of Maryland School of Medicine; Baltimore, Maryland; 2015.
15. Vitamin D, “Anti-Aging” Hormone Klotho, and Functional Outcomes in Older Adults, Johns Hopkins Medical Institutions; Baltimore, Maryland; 2015.
16. Epidemiologic Research in Older Adults: Barriers, Challenges, and Recommendations, Gerontological Society of America Workshop on Human-Animal Interaction Research; Washington, DC; 2016.
17. Vitamin D and Functional Outcomes in Older Adults, University of Maryland School of Medicine; Baltimore, Maryland; 2016.
18. The Proteomic Milieu of Low Vitamin D: Methods, Mechanisms, and Beyond. University of Maryland Institute for Genomic Sciences; Baltimore, Maryland; 2018.

19. Project on Optimal Vitamin D in the Elderly (PROVIDE): Rationale, Design, and Methods. Cross Cohorts Collaboration Working Group Webinar; 2018.
20. Exploring the Longitudinal Relationship between Depression and Pain in Knee Osteoarthritis. Johns Hopkins Medical Institutions; Baltimore, Maryland; 2018.
21. Methods for Overcoming Bias from Truncation by Death and Selective Survival in Studies of Older Adults. University of California, San Diego; San Diego, California; 2019.
22. Analytical Considerations of Developing a Phenotypic Aging Measure: The Conceptual Framework Must Come First. Gerontological Society of America Annual Meeting; Austin, Texas; 2019.
23. Addressing Nonignorably Missing Proxy-Reported Exposure Data. Joint Statistical Meetings; virtual (originally scheduled for Philadelphia, Pennsylvania); 2020.
24. Comparing Analytical Methods for Gut Microbiome and Aging: Gut Microbiota and Body Weight in MrOS. Gerontologic Society of America Annual Meeting; virtual (originally scheduled for Philadelphia, Pennsylvania); 2020.
25. Exploring the Longitudinal Relationship between Depression and Pain in Knee Osteoarthritis. Johns Hopkins Medical Institutions; Baltimore, Maryland (virtual); 2020.
26. Panel Discussant, Epidemiology and Biostatistics of Aging Alumni Career Panel. Johns Hopkins Medical Institutions; Baltimore, Maryland (virtual); 2020.
27. Sensitivity Analysis for Nonignorable Missingness and Outcome Misclassification from Proxy Reports. Joint Statistical Meetings; virtual (originally scheduled for Seattle, Washington); 2021.
28. Vaginal Microbiota and the Genitourinary Syndrome of Menopause. American Society of Reproductive Medicine; Baltimore, Maryland; 2021.
29. Sex-specific 25-hydroxyvitamin D threshold concentrations for functional outcomes in older adults: Project on Optimal Vitamin D in Older Adults (PROVIDO). Gerontologic Society of America Annual Meeting; virtual (originally scheduled for Phoenix, Arizona); 2021.
30. Joint mixed-effects models for causal inference with longitudinal data. Georgetown University, Washington DC; 2022.
31. Vaginal microbiota and the genitourinary syndrome of menopause. Society for the Study of Reproduction Annual Conference; Spokane, Washington; 2022.
32. Challenges and Opportunities for Funding Statistical Innovation (Invited Panel). Joint Statistical Meetings; Washington, DC; 2022.
33. Epidemiology of the inverse comorbidity of dementia and cancer: biostatistical challenges and opportunities. National Institute on Aging Workshop: The Cancer-Alzheimer's Disease Nexus; virtual; 2022.
34. Addressing truncation by death and unmeasured confounding in aging research. University of California San Francisco; San Francisco, CA; 2022.
35. Addressing truncation by death and unmeasured confounding in aging research. New York University; New York, NY; 2023.
36. Sex-specific 25-hydroxyvitamin D threshold concentrations for functional outcomes in older adults: Project on Optimal Vitamin D in Older Adults (PROVIDO). Johns Hopkins Medical Institution; Baltimore, MD; 2023
37. Associations of urinary conditions with vaginal microbiota and metabolites across reproductive stages. Gerontologic Society of America Annual Meeting; Tampa, FL; 2023.
38. SPAIG Committee (Invited Panel). American Statistical Association Biopharmaceutical Section Podcast; 2024. <https://www.buzzsprout.com/16296/14471619-episode-107-spaig-committee>
39. Time-varying latent effect models for repeated measurements to address informative observation times in the U.S. Medicare Minimum Data Set. Eastern North American Region of the International Biometric Society Spring Meeting; Baltimore, MD; 2024.

International

1. Sensitivity Analysis for Informatively Interval-Censored Discrete Failure-Time Data, Biostatistical Centre, Katholieke Universiteit; Leuven, Belgium; 2004.
2. Basics in Biostatistics, National Hepatology and Tropical Medicine Research Institute, Cairo, Egypt; 2006.
3. Statistical Methods and Other Requirements Needed for International Publication of Clinical Trials, National Hepatology and Tropical Medicine Research Institute, Cairo, Egypt; 2007.
4. Basics in Biostatistics, Al-Azhar University Faculty of Medicine, Cairo, Egypt; 2009.
5. Biostatistical Methods and Reasoning, Al-Azhar University Faculty of Medicine, Cairo, Egypt; 2009.
6. How to Publish Clinical Trials: The CONSORT Statement, 14th Annual Delta Digestive Week. Tanta Fever Hospital, Ministry of Health and Populations, Tanta, Egypt; 2009.
7. Basics in Biostatistics, Ain Shams University Faculty of Medicine, Cairo, Egypt; 2010.
8. Shardell M. Combining shared parameter models with structural models to overcome death bias in aging research. International Association of Gerontology and Geriatrics World Congress, San Francisco, California; 2017.
9. Panelist, Toward a Consensus on Sarcopenia: Establishing the Link with Mobility Limitation and Other Health Outcomes. The Biomarkers Consortium; Bethesda, Maryland; 2017.

Proffered Communications

1. **Shardell M**, Scharfstein DO, Bozzette SA. On the Analysis of Informatively Interval-Censored Discrete Failure-Time Data: A Sensitivity Analysis Approach. Eastern North American Region of the International Biometric Society Annual Meeting, Pittsburgh, Pennsylvania; 2004.
2. **Shardell M**, Scharfstein DO, Galai N, Vlahov D. Survival Curve Estimation for Informatively Coarsened Discrete Event-Time Data. Eastern North American Region of the International Biometric Society Annual Meeting, Tampa, Florida; 2006.
3. Schweizer ML, Furuno JP, Harris AD, Johnson JK, **Shardell MD**, McGregor JC, Thom KA, Perencevich EN. Reducing Unnecessary use of Empiric Anti-Methicillin-Resistant Staphylococcus aureus (MRSA) Antibiotics. Interscience Conference on Antimicrobial Agents and Chemotherapy, Chicago, Illinois; 2007.
4. **Shardell M**, Scharfstein DO, Galai N, Vlahov D. Inference for Survival Curves with Informatively Coarsened Discrete Event-Time Data: Application to ALIVE. Eastern North American Region of the International Biometric Society Annual Meeting, Atlanta, Georgia; 2007.
5. Rich S, **Shardell M**, Margolis D, Baumgarten M. Pressure Ulcer Preventive Device Use among Elderly Patients Early in the Hospital Stay. National Student Research Forum, University of Texas Medical Branch, Galveston, Texas; 2007.
6. Hebden JN, **Shardell M**, Thom KA, Standiford HC, Perencevich EN, Harris AS. Impact of an Aggressive Infection Control Plan on Hospital-Wide Acinetobacter baumannii. Interscience Conference on Antimicrobial Agents and Chemotherapy, Washington, DC; 2008.
7. **Shardell M**, Miller RR. Weighted Estimating Equations for Longitudinal Studies with Death and Non-Monotone Missing Time-Dependent Covariates and Outcomes. Eastern North American Region of the International Biometric Society Annual Meeting, Arlington, Virginia; 2008.
8. Schweizer ML, Furuno JP, Harris AD, Johnson JK, **Shardell MD**, McGregor JC, Thom KA, Perencevich EN. Nafcillin or 1st Generation Cephalosporins (Naf/Ceph1) are Superior Antibiotics for Methicillin-Susceptible S. aureus (MSSA) Bacteremia. Interscience Conference on Antimicrobial Agents and Chemotherapy, San Francisco, California; 2009.
9. Rich SE, Margolis D, **Shardell M**, Hawkes WG, Miller RR, Amr S, Baumgarten M. Non-Adherence to Manual Repositioning Guidelines for Pressure Ulcer Prevention in Bedbound Hospitalized Hip Fracture

- Patients. Gerontological Society of America, National Harbor, Maryland; 2008.
10. **Shardell MD**, El-Kamary SS. Calculating Sample Size for Studies with Expected All-or_none Nonadherence and Selection Bias. Eastern North American Region of the International Biometric Society Annual Meeting, San Antonio, Texas; 2009.
 11. El-Kamary SS, **Shardell MD**, Perencevich EN, Harris AD, Schweizer ML, Patel DM, Furuno JP. Incidence and Risk Factors for Hospital-Acquired Methicillin-Resistant *Staphylococcus aureus* Infection among Children in a Tertiary Care Facility. Pediatric Academic Societies Annual Meeting, Baltimore, Maryland; 2009.
 12. Rich SE, Margolis D, **Shardell M**, Hawkes WG, Miller RR, Amr S, Baumgarten M. Use and Effectiveness of Frequent Manual Repositioning for Pressure Ulcer Prevention among Bedbound Hip Fracture Patients. American Public Health Association Annual Meeting, Philadelphia, Pennsylvania; 2009.
 13. Eber MR, **Shardell M**, Schweizer ML, Laxminarayan R, McGregor JC, Perencevich EN. Seasonal Variation in the Incidences of Bacterial Infection among Hospitalized Patients: Summer Peaks in Gram-Negative Infections. Decennial International Conference on Healthcare-Associated Infections, Atlanta, Georgia; 2010.
 14. Eber M, **Shardell M**, Schweizer M, Laxminarayan R, McGregor JC, Perencevich EN. US National Assessments of the Impact of Outdoor Ambient Temperature on Clinical Acinetobacter Isolates. Interscience Conference on Antimicrobial Agents and Chemotherapy, Boston, Mass; 2010.
 15. Schweizer ML, Perencevich EN, Eber MR, **Shardell MD**, Laxminarayan R. Optimizing Antibiotic Prescribing: Are Physicians Following National Trends in MRSA Infections Rather than Local Data When Treating MRSA Wound Infections? Interscience Conference on Antimicrobial Agents and Chemotherapy, Boston, Mass; 2010.
 16. **Shardell M**, Hicks GE, Miller RR, Magaziner J. Semiparametric Regression Models for Repeated Measures of Mortal Cohorts with Non-Monotone Missing Outcomes and Time-Dependent Covariates. Eastern North American Region of the International Biometric Society Annual Meeting, New Orleans, Louisiana; 2010.
 17. Quinn CC, **Shardell M**, Terrin M, Gruber-Baldini A. A Cluster-Randomized Trial of a Mobile Phone Personalized Behavioral Intervention for Blood Glucose Control. Scientific Meeting of the American Diabetes Association, San Diego, California; 2011.
 18. **Shardell M**. Sensitivity Analysis to Address Informative Missingness and Outcome Misclassification from Proxy Reports in Aging Research. Eastern North American Region of the International Biometric Society Annual Meeting, Washington, DC; 2012.
 19. **Shardell M**. Statistical Analysis with Missing Exposure Data Measured by Proxy Respondents: A Misclassification Problem within a Missing-Data Problem. Eastern North American Region of the International Biometric Society Annual Meeting, Orlando, Florida; 2013.
 20. **Shardell M**. Doubly Robust Estimation and Causal Inference in Longitudinal Studies with Dropout and Truncation by Death. Eastern North American Region of the International Biometric Society Annual Meeting, Baltimore, Maryland; 2014.
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