

ERIC ANDERS WHITSEL

PERSONAL

Eric A. Whitsel, MD MPH
Professor of Epidemiology
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EDUCATION

University of North Carolina (Chapel Hill, NC)	
Department of Epidemiology, Cardiovascular Program	Fellowship 2000-2003
Department of Epidemiology, Cardiovascular Program	MPH 1993-1995
School of Medicine	MD 1989-1993
Department of Biology	BS 1982-1986
University of Washington (Seattle, WA)	
Division of General Internal Medicine	Fellowship 1997-2000
Department of Medicine	Residency 1995-1999

PROFESSIONAL EXPERIENCE

Professor, UNC Department of Epidemiology	2021-
Adjunct Professor, UNC Department of Medicine	2021-
Associate Professor, UNC Department of Epidemiology	2011-2020
Lead, Cardiovascular Program Area	2017-2020
Adjunct Associate Professor, UNC Department of Medicine	2011-2020
Assistant Professor, UNC Department of Epidemiology	2004-2011
Adjunct Assistant Professor, UNC Department of Medicine	
Research Instructor, UNC Department of Medicine (Cardiology)	2003-2004
Clinical Instructor, UNC Department of Medicine	2000-2003
Fellow, UNC Department of Epidemiology, Cardiovascular Program	2000-2003
Fellow, UNC Clinical Research Curriculum	2000-2002
Fellow, UW Division of General Internal Medicine	1997-2000
Resident, Clinical Investigator Pathway, UW Department of Medicine	1995-1999
Fellow, UNC Department of Epidemiology, Cardiovascular Program	1993-1995
Res Technician, UNC Depts of Prosthodontics, Endodontics & Pharmacology	1987-1989
Research Technician, UNC Department of Biology	1985-1987

HONORS & AWARDS

NIH / NIEHS Clinical Research Loan Repayment Program Award	2003-2007
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AHA Trudy Bush Award for CVD Research in Women's Health	2005
Finalist, AHA Scientific Sessions Poster Competition in Population Science	2002
NHLBI / National Research Service Award	2000-2002
VAPSHCS General Internal Medicine Fellowship	1997-2000
NHLBI / National Research Service Award	1993-1995
Academic Honors	1992-1993
Holderness Medical Fellowship	1990-1991
John B. Graham Student Research Society	1991
Neurobiology Research Training Fellowship	1990
Honors Research Program	1986
Deans' List	1985-1986

CERTIFICATIONS & LICENSES

Licensed Physician, State of North Carolina	2000-2021
Practitioner, U.S. Drug Enforcement Agency	1999-2021
ECG & Heart Rate Variability Technician, EPICARE Center	2001
Licensed Physician, State of Washington	1995-2000
Diplomate, American Board of Internal Medicine	1999
Practitioner, Advanced Cardiac Life Support	1996
Diplomate, National Board of Medical Examiners	1995

BIBLIOGRAPHY AND PRODUCTS OF SCHOLARSHIP (asterisk indicates senior author) BOOKS & CHAPTERS

Halpern CT, Harris KM, **Whitsel EA**. Chapter 8, Studying family transitions from a systems perspective: The role of biomarkers. In: Emerging Methods in Family Research. McHale SM, Amato P, Booth A, editors. New York: Springer International Publishing; 2012. [26 pages]

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¹⁷³Casanova R, Gaussoin SA, Wallace R, Baker L, Chen JC, Manson JE, Henderson VW, Sachs BC, Justice J, **Whitsel EA**, Hayden KM, Rapp SR. Investigating Predictors of Preserved Cognitive Function in Older Women Using Machine Learning: Women's Health Initiative Memory Study. *J Alzheimers Dis* 2021 Oct 7. doi: 10.3233/JAD-210621. [7 pages].

¹⁷²Hart JE, Hohensee C, Laden F, Holland I, **Whitsel EA**, Wellenius GA, Winkelmayr WC, Sarto GE, Warsinger Martin L, Manson JE, Greenland P, Kaufman J, Albert C, Perez MV. Long-Term Exposures to Air Pollution and the Risk of Atrial Fibrillation in the Women's Health Initiative Cohort. *Environ Health Perspect* 2021;129(9):97007. [9 pages].

¹⁷¹Wang X, Younan D, Petkus AJ, Beavers DP, Espeland MA, Chui HC, Resnick SM, Gatz M, Kaufman JD, Wellenius GA, **Whitsel EA**, Manson JE, Chen JC. Ambient Air Pollution and Long-Term Trajectories of Episodic Memory Decline among Older Women in the WHIMS-ECHO Cohort. *Environ Health Perspect* 2021;129(9):97009. [16 pages].

¹⁷⁰Shadyab AH, McEvoy LK, Horvath S, **Whitsel EA**, Rapp SR, Espeland MA, Resnick SM, Manson JE, Chen JC, Chen BH, Li W, Hayden KM, Bao W, Kusters CDJ, LaCroix AZ.

Association of Epigenetic Age Acceleration with Incident Mild Cognitive Impairment and Dementia Among Older Women. *J Gerontol A Biol Sci Med Sci* 2021;glab245. [6 pages].

- ¹⁶⁹Choi SH, Jurgens SJ, Haggerty CM, Hall AW, Halford JL, Morrill VN, Weng LC, Lagerman B, Mirshahi T, Pettinger M, Guo X, Lin HJ, Alonso A, Soliman EZ, Kornej J, Lin H, Moscatti A, Nadkarni GN, Brody JA, Wiggins KL, Cade BE, Lee J, Austin-Tse C, Blackwell T, Chaffin MD, Lee CJ, Rehm HL, Roselli C; Regeneron Genetics Center, Redline S, Mitchell BD, Sotoodehnia N, Psaty BM, Heckbert SR, Loos RJF, Vasani RS, Benjamin EJ, Correa A, Boerwinkle E, Arking DE, Rotter JI, Rich SS, **Whitsel EA**, Perez M, Kooperberg C, Fornwalt BK, Lunetta KL, Ellinor PT, Lubitz SA; NHLBI Trans-Omics for Precision Medicine (TOPMed) Consortium. Rare Coding Variants Associated With Electrocardiographic Intervals Identify Monogenic Arrhythmia Susceptibility Genes: A Multi-Ancestry Analysis. *Circ Genom Precis Med* 2021;14(4):e003300. [11 pages].
- ¹⁶⁸Yu B, Roberts MB, Raffield LM, Zekavat SM, Nguyen NQH, Biggs ML, Brown MR, Griffin G, Desai P, Correa A, Morrison AC, Shah AM, Niroula A, Uddin MM, Honigberg MC, Ebert BL, Psaty BM, **Whitsel EA**, Manson JE, Kooperberg C, Bick AG, Ballantyne CM, Reiner AP, Natarajan P, Eaton CB; National Heart, Lung, and Blood Institute TOPMed Consortium. Supplemental Association of Clonal Hematopoiesis With Incident Heart Failure. *J Am Coll Cardiol* 2021;78(1):42-52.
- ¹⁶⁷Jhun MA, Mendelson M, Wilson R, Gondalia R, Joehanes R, Salfati E, Zhao X, Braun KVE, Do AN, Hedman ÅK, Zhang T, Carnero-Montoro E, Shen J, Bartz TM, Brody JA, Montasser ME, O'Connell JR, Yao C, Xia R, Boerwinkle E, Grove M, Guan W, Liliane P, Singmann P, Müller-Nurasyid M, Meitinger T, Gieger C, Peters A, Zhao W, Ware EB, Smith JA, Dhana K, van Meurs J, Uitterlinden A, Ikram MA, Ghanbari M, Zhi D, Gustafsson S, Lind L, Li S, Sun D, Spector TD, Chen YI, Damcott C, Shuldiner AR, Absher DM, Horvath S, Tsao PS, Kardia S, Psaty BM, Sotoodehnia N, Bell JT, Ingelsson E, Chen W, Dehghan A, Arnett DK, Waldenberger M, Hou L, **Whitsel EA**, Baccarelli A, Levy D, Fornage M, Irvin MR, Assimes TL. A multi-ethnic epigenome-wide association study of leukocyte DNA methylation and blood lipids. *Nat Commun* 2021;12(1):3987. [13 pages].
- ¹⁶⁶Moore CR, Jain S, Haas S, Yadav H, **Whitsel E**, Rosamand W, Heiss G, Kucharska-Newton AM. Ascertaining Framingham heart failure phenotype from inpatient electronic health record data using natural language processing: a multicentre Atherosclerosis Risk in Communities (ARIC) validation study. *BMJ Open* 2021;11(6):e047356. [7 pages].
- ¹⁶⁵Matías-García PR, Ward-Caviness CK, Raffield LM, Gao X, Zhang Y, Wilson R, Gao X, Nano J, Bostom A, Colicino E, Correa A, Coull B, Eaton C, Hou L, Just AC, Kunze S, Lange L, Lange E, Lin X, Liu S, Nwanaji-Enwerem JC, Reiner A, Shen J, Schöttker B, Vokonas P, Zheng Y, Young B, Schwartz J, Horvath S, Lu A, **Whitsel EA**, Koenig W, Adamski J, Winkelmann J, Brenner H, Baccarelli AA, Gieger C, Peters A, Franceschini N, Waldenberger M. DNAm-based signatures of accelerated aging and mortality in blood are associated with low renal function. *Clin Epigenetics* 2021;13(1):121. [16 pages].
- ¹⁶⁴Nachun D, Lu AT, Bick AG, Natarajan P, Weinstock J, Szeto MD, Kathiresan S, Abecasis G, Taylor KD, Guo X, Tracy R, Durda P, Liu Y, Johnson C, Rich SS, Van Den Berg D, Laurie C, Blackwell T, Papanicolaou GJ, Correa A, Raffield LM, Johnson AD, Murabito J, Manson JE, Desai P, Kooperberg C, Assimes TL, Levy D, Rotter JI, Reiner AP, **Whitsel EA**, Wilson JG, Horvath S, Jaiswal S; NHLBI Trans-Omics for Precision Medicine (TOPMed)

Consortium. Clonal hematopoiesis associated with epigenetic aging and clinical outcomes. *Aging Cell* 2021;20(6):e13366. [12 pages].

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- ¹⁶¹Pottinger TD, Khan SS, Zheng Y, Zhang W, Tindle HA, Allison M, Wells G, Shadyab AH, Nassir R, Martin LW, Manson JE, Lloyd-Jones DM, Greenland P, Baccarelli AA, **Whitsel EA**, Hou L. Association of cardiovascular health and epigenetic age acceleration. *Clin Epigenetics* 2021;13(1):42. [6 pages].
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- ¹⁵⁹Haring B, Reiner AP, Liu J, Tobias DK, **Whitsel E**, Berger JS, Desai P, Wassertheil-Smoller S, LaMonte MJ, Hayden KM, Bick AG, Natarajan P, Weinstock JS, Nguyen PK, Stefanick M, Simon MS, Eaton CB, Kooperberg C, Manson JE. Healthy lifestyle and clonal hematopoiesis of indeterminate potential: results from the Women's Health Initiative. *J Am Heart Assoc* 2021;10(5):e018789. [14 pages].
- ¹⁵⁸Drager D, Soliman EZ, Meyer ML, Zhang ZM, Alonso A, Heiss G, **Whitsel EA***. Short-term repeatability of the Peguero-Lo Presti electrocardiographic left ventricular hypertrophy criteria. *Ann Noninvasive Electrocardiol* 2021:e12829. [7 pages].
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- ¹⁴⁷Ma J, Rebholz CM, Braun KVE, Reynolds LM, Aslibekyan S, Xia R, Biligowda NG, Huan T, Liu C, Mendelson MM, Joehanes R, Hu EA, Vitolins MZ, Wood AC, Lohman K, Ochoa-Rosales C, van Meurs J, Uitterlinden A, Liu Y, Elhadad MA, Heier M, Waldenberger M, Peters A, Colicino E, **Whitsel EA**, Baldassari A, Gharib SA, Sotoodehnia N, Brody JA, Sitlani CM, Tanaka T, Hill WD, Corley J, Deary IJ, Zhang Y, Schöttker B, Brenner H, Walker ME, Ye S, Nguyen S, Pankow J, Demerath EW, Zheng Y, Hou L, Liang L, Lichtenstein AH, Hu FB, Fornage M, Voortman T, Levy D. Whole blood DNA methylation signatures of diet are associated with cardiovascular disease risk factors and all-cause mortality. *Circ Genom Precis Med* 2020;13(4):e002766. [10 pages].
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ABSTRACTS (asterisk indicates senior author)

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- ⁹**Whitsel EA**, Cooper L, Massing M, Rautaharju P, Conwill D, Sheps DS, Shahar E, Rosamond WR. Painless myocardial infarction: ARIC community surveillance 1987-89. *Circulation* 1995;91(3):934.
- ⁸Liao D, Schreiner PZ, Mims D, **Whitsel EA**, Cai J, Higgins M, Heiss G. Reliability of abdominal height measurement and its comparison with other anthropometric measures. Trainee Session, 35th AHA Conference on Cardiovascular Disease Epidemiology and Prevention, 1995:3.
- ⁷Bossut DF, **Whitsel EA**, Maixner W. Effects of frequency, intensity, and opiate receptor antagonism on vagal afferent-mediated antinociception. *Soc Neurosci Abstr* 1989;15(1):156.
- ⁶Maixner W, Bossut DF, **Whitsel EA**. Stimulation of thoracic vagal afferents inhibits the jaw-opening reflex in cats. *Soc Neurosci Abstr* 1989;15(1):182.
- ⁵Maixner W, Bossut DF, **Whitsel EA**. Cardiopulmonary vagal afferent modulation of the jaw-opening reflex. *J Dent Res* 1989;68:897.
- ⁴Madison S, **Whitsel EA**, Suarez-Roca H, Maixner W. Effects of leukotriene B4 on intradental nerve activity. *J Dent Res* 1989;68:243.

³Maixner W, **Whitsel EA**, Nestor J, Zuniga J, Madison S. Vagal afferent modulation of the jaw-opening reflex elicited by peripheral and central stimulation. *Soc Neurosci Abstr* 1988;14(1):174.

²Madison S, **Whitsel EA**, Maixner W. Effects of potassium-based salts on intradental nerve activity in cats. *J Dent Res* 1988;67:275.

¹Maixner W, **Whitsel EA**, Madison S. Vagal afferent modulation of the jaw-opening reflex in cats. *J Dent Res* 1988;67:291.

DIGITAL SCHOLARSHIP

¹⁸**Whitsel EA**, Angel R, O'Hara R, Qu L, Carrier K, Harris KM. Add Health Wave V Documentation: Measures of Inflammation and Immune Function. 2020. <https://doi.org/10.17615/99s8-5w62>.

¹⁷**Whitsel EA**, Angel R, O'Hara R, Qu L, Carrier K, Harris KM. Add Health Wave V Documentation: Renal Function. 2020. <https://doi.org/10.17615/n0e5-tb66>.

¹⁶**Whitsel EA**, Angel R, O'Hara R, Qu L, Carrier K, Harris KM. Add Health Wave V Documentation: Lipids. 2020. <https://doi.org/10.17615/5jnx-3h72>.

¹⁵**Whitsel EA**, Angel R, O'Hara R, Qu L, Carrier K, Harris KM. Add Health Wave V Documentation: Measures of Glucose Homeostasis. 2020. <https://doi.org/10.17615/djqy-6508>.

¹⁴**Whitsel EA**, Angel R, O'Hara R, Qu L, Carrier C, Harris KM. Add Health Wave V Documentation: Anthropometrics. 2020. <https://doi.org/10.17615/b7dh-4g76>.

¹³**Whitsel EA**, Angel R, O'Hara R, Qu L, Carrier K, Harris KM. Add Health Wave V Documentation: Cardiovascular Measures. 2020. <https://doi.org/10.17615/qtme-ag52>.

¹²**Whitsel EA**, Angel R, O'Hara R, Qu L, Carrier K, Harris KM. Add Health Wave V Documentation: Medication Use - Home Exam. 2020. <https://doi.org/10.17615/yfnj-xw14>.

¹¹**Whitsel EA**, Angel R, Dean SC, O'Hara R, Qu L, Carrier K, Harris KM. Add Health Wave V Documentation: Medication Use - Add Health Survey. 2019. <https://doi.org/10.17615/gcvy-ar06>.

¹⁰Cuthbertson C, **Whitsel EA**, Suchindran CM, Chen P, Cheng MM, Williams R, Tabor JW, Killeya-Jones LA, Hussey JM, Halpern CT, Harris KM. Add Health Wave IV Documentation: Cardiovascular Measures Appendix I: Baroreflex Sensitivity & Hemodynamic Recovery. 2014. <https://doi.org/10.17615/C6CW86>.

⁹**Whitsel EA**, Cuthbertson CC, Tabor JW, Potter AJ, Wener MH, Clapshaw PA, Killeya-Jones LA, Halpern CT, Harris KM. Add Health Wave IV Documentation: Lipids. 2013. <https://doi.org/10.17615/C6836K>.

⁸**Whitsel EA**, Tabor JW, Nguyen QC, Cuthbertson CC, Wener MH, Potter AJ, Killeya-Jones LA, Harris KM. Add Health Wave IV Documentation: Measures of Glucose Homeostasis. 2012. <https://doi.org/10.17615/C64D4P>.

⁷**Whitsel EA**, Cuthbertson CC, Tabor JW, Potter AJ, Wener MH, Killeya-Jones LA, Harris KM. Add Health Wave IV Documentation: Measures of Inflammation and Immune Function. 2012. <https://doi.org/10.17615/C60M2R>.

⁶Smolen A, **Whitsel EA**, Tabor JW, Killeya-Jones LA, Cuthbertson CC, Hussey JM, Halpern CT, Harris KM. Add Health Wave IV Documentation: Candidate Genes. 2012. <https://doi.org/10.17615/C6ND4B>.

⁵Tabor JW, **Whitsel EA**. Add Health Wave IV Documentation: Prescription Medication Use. 2010. <https://doi.org/10.17615/C6VW8J>.

⁴**Whitsel EA**, Tabor JW, Groner J, Schuft C. Add Health, Wave IV documentation. Blood pressure monitor calibration form and protocol. 2010. <http://www.cpc.unc.edu/projects/addhealth/data/guides/bp.pdf>.

³Entzel PP, **Whitsel EA***, Richardson A, Tabor JW, Hallquist S, Hussey JM, Halpern CT, Harris KM. Add Health, Wave IV documentation. Cardiovascular & anthropometric measures. 2009. <https://doi.org/10.17615/C6HM11>.

²Bishoff ST, Rayne RC, **Whitsel EA**. Tracheal cannulation and thyroidectomy of the rat: An Instructional videotape. UNC Classroom Technological Services Center, Chapel Hill, 1987

¹Bishoff ST, Rayne RC, **Whitsel EA**. Pithing the frog and isolation of the gastrocnemius muscle and sciatic nerve: An instructional videotape. UNC Classroom Technological Services Center, Chapel Hill, 1987

NON-REFEREED PAPERS/ARTICLES

PRESENTATIONS

Add Health: Design, Data, Access & Effective Use. Wave V Biological Data. Population Association of America. Austin, TX, April 2019.

ARIC Geocoding Overview, Geographic Distribution of Participants & Contextual Data Availability. ARIC Environmental Working Group. Chapel Hill, NC, March 2019.

ARIC Geocoding Overview & Geographic Distribution of Participants V1-V5. Air Pollution, Alzheimer's Disease, and Related Outcomes External Advisory Board. George Washington University, Washington, DC, January 2019.

Methodology Session: Biology & Birth Records Projects. Add Health User Conference. Bethesda, MD, July, 2018.

Data Innovations in Add Health: Surveillance. 7th Annual Demography Daze: Data, Measurement and Concept Innovations in Population Studies. Duke University. Durham, NC, May 2018.

Wave VI of the National Longitudinal Study of Adolescent to Adult Health: Biological Measures Core. NIH Executive Roundtable for Add Health. Bethesda, MD, January 2018.

Add Health Wave V: Quality Control & Sub-studies. Hooper-Holmes Training. Chapel Hill, NC, January 2018.

Add Health Wave V: Data Quality. EMSI Meeting. Chapel Hill, NC, June, 2016.

Passion for CVD & Environmental Epidemiology. Cardiovascular Epidemiology Program Orientation. Chapel Hill, NC, September, 2016.

Methodology Session: Add Health Biomarker Data. Add Health Users Conference, Bethesda, MD, June, 2016.

Plenary Session: Program Project IV – The Biology of Chronic Disease Emergence. Add Health Users Conference, Bethesda, MD, June, 2016.

Methodology Session: Add Health Wave IV Biomarker Data. Add Health Users Conference, Bethesda, MD, June, 2014.

Estimating Electrocardiographic Effects of Particulate Matter. Group on Atmospheric Science and Pollution (GASP) Seminar. Chapel Hill, NC. January, 2014.

Carolina Population Center Interdisciplinary Workshop: The Role of Genes, Genetics, and Epigenetics in Population Research. Chapel Hill, NC. October, 2013.

Add Health Wave IV Biomarkers: Update. Add Health Data Users Seminar. Chapel Hill, NC. April, 2013.

Epigenetic Mechanisms of Particulate-Mediated CVD Risk. CVD Epidemiology Seminar. Chapel Hill, NC. April, 2013.

Methodology Session: Wave IV Biomarker Data Update. 2012 Add Health Users Conference. Bethesda, MD. July, 2012.

Dried Capillary Whole Blood Spot-Based Hemoglobin A1c, Fasting Glucose, and Diabetes Prevalence in a Nationally Representative Population of Young U.S. Adults: Add Health, Wave IV. American Heart Association Epidemiology and Prevention / Physical Activity, Nutrition and Metabolism 2012 Scientific Sessions. San Diego, CA. March, 2012.

Natural & Built Environment SIG. Progress & Emerging Opportunities. WHI Extension 2010-2015. Winston-Salem, NC. September, 2011.

CVD Risk Factor Assessment in the Field: Add Health Wave IV Biomarker Data Collection. CVD Epidemiology Seminar. Chapel Hill, NC. April, 2010.

Methodology Session: Wave IV Biomarker Data in Add Health. 2010 Add Health Users Conference. Bethesda, MD. July, 2010

Physical & Built Environment Scientific Interest Group. Progress & Opportunities in the WHI Extension 2010-2015. Women's Health Initiative Investigator's Meeting. Chicago, IL. May, 2010

Wave IV Biomarker Data Quality. Add Health National Advisory Committee Meeting. Chapel Hill, NC. February, 2010

ARIC CHD Morbidity and Mortality Classification Committee Recertification. Chapel Hill, NC. September, 2009

Wave IV Biomarker Data. Add Health National Advisory Committee Meeting. Chapel Hill, NC. November, 2008

ARIC CHD Morbidity and Mortality Classification Committee Recertification. Chapel Hill, NC. September, 2008

Methodology Session: Wave IV Biomarker Data in Add Health. 2008 Add Health Users Conference. Natcher Conference Center, NIH Campus, Bethesda, MD. July, 2008

Cardiac anatomy & the pathophysiology / presentation of MI. ARIC Coronary Heart Disease Abstractor Training Workshop. Chapel Hill, NC. April, 2008

Waves I to IV of the National Longitudinal Study of Adolescent Health (Add Health): Data availability, access, and analysis. Society for Adolescent Medicine. Adolescent Obesity: Prevention and Treatment, Greensboro, NC. March 2008

Heart rate variability, ambient particulate matter air pollution (PM) and glucose homeostasis: The Environmental Epidemiology of Arrhythmogenesis in the Women's Health Initiative (EEAWHI). 48th Annual Conference on Cardiovascular Disease Epidemiology and Prevention, Colorado Springs, CO. March, 2008

Medication use questionnaire. Hispanic Community Health Study / Study of Latinos (HCHS/SOL) Central Training. Chapel Hill, NC. August, 2007

The National Longitudinal Study of Adolescent Health (Add Health) National Advisory Committee Meeting. Wave IV Pre-Test biomarker results, quality & intra-individual variation. Chapel Hill, NC. June, 2007

Add Health Wave IV: Biomarkers. Carolina Population Center Seminar. Chapel Hill, NC. June, 2007

Ventricular repolarization, systolic hypertension and ambient particulate air pollution: The Environmental Epidemiology of Arrhythmogenesis in WHI (EEAWHI), 1999-2002. 47th Annual Conference on Cardiovascular Disease Epidemiology and Prevention, Orlando, FL. March, 2007

Heart rate variability, ambient particulate matter and socioeconomic position: The Environmental Epidemiology of Arrhythmogenesis in the Women's Health Initiative. CVD Epidemiology Seminar. Chapel Hill, NC. November, 2006

Heart rate variability, ambient particulate matter and socioeconomic position: The Environmental Epidemiology of Arrhythmogenesis in WHI. The Role of Air Pollutants in Cardiovascular Disease. U.S. Environmental Protection Agency. Research Triangle Park, NC. October 2006

Heart rate variability, ambient particulate matter and socioeconomic context: The Environmental Epidemiology of Arrhythmogenesis in WHI. 46th Annual Conference on Cardiovascular Disease Epidemiology and Prevention. Phoenix, AZ. March, 2006

Overview of the Add Health Wave IV Biology Core. Reverse site visit with Special Emphasis Panel ZRG1 HOPB 40. Washington, DC. May, 2005

Accuracy of commercial geocoding in a Women's Health Initiative ancillary study: The Environmental Epidemiology of Arrhythmogenesis in WHI. 45th Annual Conference on Cardiovascular Disease Epidemiology and Prevention. Washington, DC. April, 2005

GIS Procedures for Atherosclerosis Risk in Communities Cohort and Community Surveillance. ARIC Steering Committee Meeting. Washington, DC. April, 2005

Overview of the ARIC Carotid MRI Medication Survey. Central Training Session. Chapel Hill, NC. February, 2005

Accuracy of commercial geocoding in a Women's Health Initiative ancillary study: The Environmental Epidemiology of Arrhythmogenesis in WHI. CVD Epidemiology Seminar. Chapel Hill, NC. February, 2005

Effects of measurement error on associations between ECG measures and ambient PM concentrations in the Environmental Epidemiology of Arrhythmogenesis in WHI (EEAWHI). Defense of dissertation proposal. Chapel Hill, NC. May, 2004

Accuracy and repeatability of commercial geocoding in the Life Course Socioeconomic Status, Social Context & Cardiovascular Disease Study. 44th Annual Conference on Cardiovascular Disease Epidemiology and Prevention. San Francisco, CA. March, 2004

Length of the androgen receptor CAG repeat and duration of the RR, QRS, and rate-corrected QT intervals in black men. Junior Faculty Research Symposium, University of North Carolina Department of Medicine. Chapel Hill, NC. January, 2004

The Environmental Epidemiology of Arrhythmogenesis in WHI: An Overview. Cardiovascular Disease Epidemiology Seminar Series, Cardiovascular Disease Epidemiology Program Orientation. Chapel Hill, NC. October, 2003

Overview of the physical examination component of the National Vietnam Veterans' Longitudinal Study (NVVLS) Health Examination. NVVLS Scientific Advisory Board Meeting. Boston, MA. September, 2003

TEACHING RECORD – LECTURES

EPID 735, Cardiovascular Disease Epidemiology: Ambient Air Quality & Cardiovascular Health. Fall 2019-2020, ~ 15 students.

Peer-Led CV Epidemiology Workshop: Abstract Writing. Fall, 2019. ~ 15 students.

EPID / SOCI 823, Integrating Social and Biological Perspectives on Human Health: Cardiovascular Health. Fall, 2018. 19 students.

Peer-Led CV Epidemiology Workshop: Miniaturized Electrocardiography - Afib Detection & HRV Measurement Using KardiaMobile Technology. Fall, 2018. ~ 11 students.

Peer-Led CV Epidemiology Workshop: Real-World Laboratory Challenges: Cystatin C Calibration. Spring 2018, ~ 8 students.

Peer-Led CV Epidemiology Workshop: Who's Still Smoking and Why? Spring 2018. ~ 10 students.

EPID 735, Cardiovascular Disease Epidemiology: Cardiovascular Medications. Fall 2015-2017, ~ 10 students.

MHCH 859, Theoretical Foundations of Maternal & Child Health: Advantages, Challenges and Quality Control of Biomarker Data. Fall 2014, 6 students.

EPID 735, Cardiovascular Disease Epidemiology: Estimating Electrocardiographic Effects of Airborne PM. Fall 2013, ~ 15 students.

Peer-Led CV Epidemiology Workshop: Designing New CVD Prevention Efforts: The Polypill. Jointly with Anthony Viera. Spring 2013, ~ 15 students.

EPID 735, Cardiovascular Disease Epidemiology: Cardiovascular Medication Use & Coding, Fall 2012, ~ 15 students.

Peer-Led CV Epidemiology Workshop: Cardiovascular Medications (Spring 2012), ~ 15 students.

EPID 735, Cardiovascular Disease Epidemiology: Cardiovascular Medications, Fall 2011, ~ 15 students.

Peer-Led CV Epidemiology Workshop: Keeping the File Drawer Open (Fall 2010), ~ 15 students

EPID 735, Cardiovascular Disease Epidemiology: Practice of Epidemiology - Ambient Particulate Matter Air Pollution and Incident Venous Thromboembolism (Fall 2010), ~ 15 students

Peer-Led CV Epidemiology Workshop: Preventing and Identifying Data Fabrication (Spring 2010), ~ 15 students

EPID 735, Cardiovascular Disease Epidemiology: Practice of Epidemiology - Add Health Wave IV Lipids (Fall 2009), ~ 15 students

Peer-Led CV Epidemiology Workshop: The Art and Ache of Scientific Writing (Spring 2009), ~10 students

Peer-Led CV Epidemiology Workshop: Reviewing Manuscripts & Responding to Reviews (Fall 2008), ~10 students

Peer-Led CV Epidemiology Workshop: Add Health Waves I to IV: Data availability, Access and Analysis (Spring 2008), ~ 10 students

EPID 735, Cardiovascular Disease Epidemiology: Environmental Agents & CVD (Fall 2005, 2006, & 2007), Lecture, ~15 students

EPID 141, Air pollution, GIS, CHD & CHF (Spring 2006), Co-Director, 4 students. See attached syllabus

EPID 277, Environmental Epidemiology: The Use of GIS in Environmental Exposure Assessment (Fall 2005), Lecture, ~15 students. See attached syllabus.

EPID 225, Clinical Trials in Epidemiology: Meta-Analysis Help Session I – Getting Started (Spring 2003), Lecture, ~ 30 students

EPID 225, Clinical Trials in Epidemiology: Meta-Analysis Help Session II – What's Next? (Spring 2003), Lecture, ~ 30 students

EPID 225, Clinical Trials in Epidemiology: Meta-Analysis Help Session III – Analysis (Spring 2003), Lecture, ~ 30 students

EPID 225, Clinical Trials in Epidemiology: Meta-Analysis Help Session IV – Analysis Continued (Spring 2003), Lecture, ~ 30 students

EPID 225, Clinical Trials in Epidemiology: Meta-Analysis Help Session IV – Summary & Questions (Spring 2003), Lecture, ~ 30 students

EPID 225, Clinical Trials in Epidemiology: Meta-Analysis Help Session IV – Questions & Answers (Spring 2003), Lecture, ~ 30 students

TEACHING RECORD – GRADUATE STUDENT ADVISING

All CV & Gen HLB / NRSA Trainees. (EPID Masters / Doctoral Students and Post-Doctoral Fellows). Faculty Advisor, Peer-Led CV Epidemiology Research Workshop 2005-2021. See attached syllabi.

Narain, Morgan N. (TOXI Doctoral Student). Biological and Biomedical Sciences Program Faculty Mentor 2021. Pilot examination of genetic susceptibility to particulate matter-associated expression of stromal cell-derived factor 1 (SDF1) in the Women's Health Initiative.

Buchheit, Sophie. (Brown University Intern). Faculty Mentor 2020-2021. Radon exposure and stroke risk in the Women's Health Initiative. Linking Internships and Knowledge (LINK) Award recipient.

Chen, Dazhe (Kenny). (EPID Doctoral Student). Doctoral Committee Member 2019-2021. Examining exposure to PM_{2.5} and BTEX-H during oil spill cleanup and incident coronary heart disease in the GuLF Study.

Xi, Yuzhi. (EPID Doctoral Student). Doctoral Committee Member 2019-2021. U.S. dialysis patients and PM_{2.5} exposure.

Anthony, Kurt M. (EPID Doctoral Student / Graduate Research Assistant). Faculty Advisor 2019-2021. UNC Cardiovascular Epidemiology NRSA recipient 2020.

Love, Shelly-Anne M. (EPID Post-Doctoral Fellow). Mentor 2019-2021. Clonal hematopoiesis of indeterminate potential and social stress. UNC Genetic Epidemiology of Heart, Lung and Blood Traits NRSA recipient 2019-2021.

Collins, Jason M. (EPID Doctoral Student). Faculty Advisor 2018-2021. Epigenetic and somatic genomic effects of aircraft noise exposure. UNC Genetic Epidemiology of Heart, Lung and Blood Traits NRSA recipient 2018-2020.

Baldassari, Antoine. (EPID Doctoral Student / Graduate Research Assistant). Doctoral Committee Member & Faculty Co-Advisor 2016-2021. Epigenetic effects of multi-pollutant exposures. Multi-ethnic genome-wide association study of decomposed cardiac conduction phenotypes.

Reynolds, Kamika R. (EPID Doctoral Student). Doctoral Committee Member 2018-2021. Weight loss intentionality, body composition, cardiovascular disease and mortality risk in older adults.

Rudolph, Jacqueline E. (EPID Doctoral Student). Doctoral Committee Member 2017-2019. PhD awarded 2019. Title: Trends in US mortality and effects of potential nationwide interventions on ambient levels of fine particulate matter.

Gondalia, Rahul. (EPID Doctoral Student / Graduate Research Assistant). Faculty Advisor 2014-2019. Doctoral Committee Chair 2017-2019. PhD awarded 2019. Title: Epigenetic mediation of particulate matter-associated changes in heart rate variability and QT interval duration. UNC Cardiovascular Epidemiology NRSA recipient 2014-2017. WHI Annual Investigator Meeting Fellowship recipient 2016. Berton H. Kaplan Student Publication Award 2017. Cardiovascular Epidemiology Travel Award 2018.

Holliday, Katelyn M. (EPID Post-Doctoral Fellow, Doctoral Student and Graduate Research Assistant). Primary Mentor 2016-2018. Faculty Advisor 2015-2016. Epigenetic and diabetogenic effects of gaseous and particulate air pollution. UNC Environmental Epidemiology NRSA recipient 2016-2018. EPA / NCEA particulate matter integrated science assessment.

Méndez-Giráldez, Raul. (EPID Post-Doctoral Fellow). Primary Mentor 2017. QT-prolonging drug-gene interactions. Epigenetic effects of meteorological measures. CHARGE 2017 Best Poster Award. WHI Annual Investigator Meeting Fellowship recipient 2017.

Justice, Anne E. (EPID Post-Doctoral Fellow). Mentor 2016-2017. Epigenetic effects of obesogenic and anorexic medications. CHARGE 2017 Best Poster Award.

Seyerle Amanda A. (EPID Doctoral Student). Doctoral Committee Member 2014-2016. Pharmacogenetics of ventricular conduction in multi-ethnic populations.

Harduar Morano, Laurel. (EPID Doctoral Student). Doctoral Committee Member 2013-2016. Characterization of the heat-health relationship within Florida and identification of population level risk factors.

Napier, Melanie D. (EPID Doctoral Student / Research Assistant). Faculty Co-Advisor 2013-2016. Genome-wide association studies of ectopy and other electrocardiographic phenotypes. WHI Annual Investigator Meeting Fellowship recipient 2014. Cardiovascular Epidemiology Publication Funding Award 2018.

Kats, Dmitry. (EPID Doctoral Student). Practicum Advisor 2016. Medication inventory training and certification in the Atherosclerosis Risk in Communities Study, Visit 6.

Van Holle, Ann (EPID Doctoral Student). Intradepartmental Review Committee Member 2015.

Busch, Evan L. (EPID Doctoral Student / Graduate Research Assistant). Faculty Co-Advisor 2013-2015. Genome-wide association studies of drug-gene interactions. Social relationships, inflammation, and cancer incidence.

Cuthbertson, Carmen C. (EPID Doctoral Student / Research Assistant). Faculty Advisor 2013-2015. Genome-wide association studies of electrocardiographic phenotypes. Hemodynamic recovery, baroreflex sensitivity and cardiovascular disease risk factors.

Wilkinson, Andra. (MCH Doctoral Student). Mentor 2013-2014. Sexual differences in long-term health implications of adolescent risk behavior. NIH/NIDA-supported F31 fellowship recipient 2014.

Jimenez, Monica P. (EPID Doctoral Student / Research Assistant). Faculty Co-Advisor 2013. Genome-wide association studies of drug-gene interactions.

Yoneyama, Sachiko (EPID Doctoral Student). Intradepartmental Review Committee Member 2013.

Gellert, Kapuaola. (EPID Doctoral Student). Co-Mentor 2012-2014. Short-term repeatability of the electrocardiographic Tpeak-Tend interval.

Meyer, Michelle C. (EPID Doctoral Student). Co-Mentor 2011-2014. Short-term repeatability of electrocardiographic P wave indices and PR interval. Heart Rate Variability in Hispanics / Latinos.

Assimon, Magdalene M. (EPID Doctoral Student). Co-Mentor 2012-2014. Validity and reliability of medication coding in HCHS / SOL.

O'Brien, Emily C. (EPID Doctoral Student). Intradepartmental Review Committee Member 2010).

Hausman Holliday, Katelyn M. (EPID Masters Student). Departmental and Masters Practicum Advisor 2009-2012. Masters Committee Chair 2009-2011. Sources of heterogeneity in the correlation between personal and ambient, outdoor concentrations of PM₁₀: implications for bias in epidemiologic studies. Arrhythmia risk estimates associated with meta-analytically informed interpolation of personal from ambient PM exposures. Using meta-analysis to inform interpolation of personal from ambient particulate matter exposures and clarify effects of measurement error. EPA / NCEA lead integrated science assessment. Fellowship recipient for the 23rd and 24th Annual Conferences of the International Society for Environmental Epidemiology, in Barcelona, Spain 2011 and Columbia, SC 2012.

R01-NA NIH / NIEHS 04/01/22-03/31/27
Title: The Epidemiology & Somatic Genomic Pathogenesis of Radon-Related Stroke
Aim: To characterize the epidemiology and somatic genomic pathogenesis of radon-related stroke in a demographically and environmentally diverse group of 194,015 participants from three NHLBI-supported US cohorts.
Total Costs: \$3,423,499
Role: PI (25%)

R21-NA (Whitsel) NIH / 10/01/21-09/30/23
Subcontractor: Duke University (Bhavsar)
Title: Residential Mobility, Long Term Air Pollution Exposure, and COVID-19 Susceptibility and Outcomes
Aim: To quantify the association between long-term air pollution exposure and COVID-19 outcomes.
Total Costs: \$42,721
Role: PI (5%)

Idea Seed Grant UNC ORD 06/01/21-09/30/21
Title: The Epidemiology & Somatic Genomic Pathogenesis of Radon-Related Stroke
Aim: To assemble and prepare time-varying (1) short- and long-term mean, pre- and post-mitigation home radon concentrations; (2) home radon testing statistics / policies; and (3) housing characteristics; plus time-invariant (4) aerial gamma-radioactivity, (5) geology, and (6) soil features needed to estimate pre- and post-mitigation home radon exposures across the US (1986-2018).
Total Costs: \$19,969
Role: PI (0%)

CONTRACTS & GRANTS – INITIATED IN 2020-2021

75N92019R0031 (Whitsel) NIH / NHLBI 10/15/20-10/14/27
Subcontractor: Wake Forest University (Vitolins)
Title: Women’s Health Initiative (WHI) Extension 2020-2027
Aim: To launch the next generation of health research projects that target older women in context.
Total Costs: \$741,433
Role (Effort): PI (12%)

U01- AG071448 (Hummer) NIH / NIA 04/01/21-03/31/26
Title: National Longitudinal Study of Adolescent to Adult Health (Add Health): Wave VI Core Project
Aims: To collect and disseminate data from at National Longitudinal Study of Adolescent to Adult Health Wave VI
Total Costs: \$29,999,071
Role (Effort): Investigator (25%)

U01- AG071450 (Aiello) NIH / NIA 04/01/21-03/31/26
Title: National Longitudinal Study of Adolescent to Adult Health (Add Health): Wave VI Cognition and Early Risk Factors for Dementia Project
Aims: To collect and disseminate data on cognitive, physical, and sensory functioning and risk factors for Alzheimer’s disease and related dementias (ADRD) at National Longitudinal Study of Adolescent to Adult Health Wave VI

Total Costs: \$9,999,990
Role (Effort): Investigator (8.33%)

R01-ES029509-03S1 (Whitsel) NIH / NIEHS / NIA 09/01/20-08/31/21
Subcontractor: George Washington University (Power)
Title: Air Pollution, Alzheimer's Disease, and Related Outcomes (Administrative Supplement)
Aims: To compare estimates of geocoded participant address-specific air pollution exposures in the Atherosclerosis Risk in Communities study and Women's Health Initiative Memory Study
Total Costs: \$141,376
Role (Effort): PI (15%)

R01-HL148565-02S1 (Whitsel) NIH / NHLBI 06/01/20-05/31/21
Subcontractor: Fred Hutchinson Cancer Center (Reiner)
Title: Clonal Hematopoiesis in the Women's Health Initiative Memory Study (Administrative Supplement)
Aims: To provide a comprehensive platform for evaluating associations between the onset and progression of clonal hematopoiesis of indeterminate potential, cognitive decline, and incident mild cognitive impairment, Alzheimer's disease, and Alzheimer's disease related dementias in a large, racially/ethnically diverse group of aging women at risk.
Total Costs: \$446,371
Role (Effort): MPI (0%)

CONTRACTS & GRANTS – CONTINUING INTO 2020-2021

R01-HL148565 (Whitsel) NIH / NHLBI 07/01/19-06/30/23
Subcontractor: Fred Hutchinson Cancer Center (Reiner)
Title: Clonal Hematopoiesis in the Women's Health Initiative
Aims: To epidemiologically characterize associations among a spectrum of exposures, clonal hematopoiesis of indeterminate potential (CHIP), and cardiovascular diseases in the Women's Health Initiative
Total Costs: \$722,906
Role (Effort): MPI (25%)

HHSN268201700001I (Couper) NIH / NHLBI 11/15/16-11/14/22
Title: Atherosclerosis Risk in Communities (ARIC) Study - Coordinating Center
Aims: To continue ARIC cohort follow-up for CVD morbidity and mortality; analyze, identify, and publish on factors related to incident CVD; re-examine the cohort in 2018-19 (Exam 7); evaluate the use of electronic health records in community surveillance of CVD; and serve as a resource for ancillary studies, investigators, research data, and mentoring.
Total Costs: \$20,649,872
Role (Effort): Investigator (5%)

R01-R01ES029509 (Whitsel) NIH / NIEHS / NIA 09/30/18-08/31/22
Subcontractor: George Washington University (Power)
Title: Air Pollution, Alzheimer's Disease, and Related Outcomes
Aims: To examine associations of air pollution exposure with Alzheimer's disease, dementia, and related outcomes using data from the in the Atherosclerosis Risk in Communities (ARIC) study.
Total Costs: \$583,576
Role (Effort): PI (10%)

R01-ES027696 (Whitsel) NIH / NIEHS 09/01/17-06/30/21
Subcontractor: U Washington (Kaufman)
Title: Air Pollutants and Cardiovascular Risk: Investigating Thresholds with Pooled Cohorts and Electronic Health Records
Aims: To assess the effects of long-term exposure to ambient air pollutants on cardiovascular diseases and mortality in a pooled-analysis of well-characterized epidemiologic cohorts in the United States.
Total Costs: \$75,500
Role (Effort): PI (4%)

R01-ES025791 (Whitsel) NIH / NIEHS 08/01/16-06/30/21
Subcontractor: Boston University (Peters)
Title: Aircraft Noise Exposure and Cardiovascular Disease (No Cost Extension)
Aims: To evaluate the effects of aircraft noise exposure on cardiovascular disease in the Women's Health Initiative cohorts.
Total Costs: \$510,597
Role (Effort): PI (10%)

CONTRACTS & GRANTS – SUBMITTED IN 2020-2021 / NOT FUNDED

R01-NA (Whitsel) NIH / NHLBI 07/01/21-06/30/25
Sub: Duke University (Bhavsar)
Title: Novel Data Linkage and Deep Learning Approaches to Identify Multifactorial Determinants of Cardiovascular Health
Aim: To develop novel, open, data science approaches to accelerate research on how child cardiopulmonary outcomes are impacted by adults in the household
Total Costs: \$671,376
Role (Effort): PI (10%)

R01-NA (Hummer) NIH / NIA 07/01/21-06/30/25
Sub: University of Nevada at Las Vegas (Lawrence)
Title: A Life Course Approach to Obesity and Health among Diverse U.S. Adults
Aim: To develop a better understanding of when, how, and among whom obesity develops and its health consequences for young-to-early-midlife adults
Total Costs: \$622,000
Role (Effort): Investigator (4.17%)

U19-AG065798 (Whitsel) NIH / NIA 09/01/20-08/31/25
Subcontractor: Boston University (Murabito)
Title: Epigenomic and Somatic Genomic Changes in Aging and Disease Risk
Aims: To estimate the longitudinal effects of contextual and individual exposures on age-related changes in the epigenome and somatic genome (ESG), to study the interplay between mechanisms of ESG aging, and to determine how the aging ESG affects risk of age-related disease
Total Costs: \$1,575,234
Role: PI, Project 1 & Investigator, Core B

R01-MD015843 (Kucharska-Newton) NIH / NIMHD 12/01/20-11/30/24
Title: Integrating EHR and Population Health to Address Disparities in Cardiovascular Health

Aim: To use electronic health records and extant data sources to document cardiovascular health disparities in the ARIC study communities, thereby enabling access to real-time resources for the development of population health interventions

Total Costs: \$2,936,186

Role: Investigator

R21-ES032975 (Whitsel) NIH / NIEHS 10/01/20-09/30/22

Subcontractor: Duke University (Bhavsar)

Title: Residential Mobility, Long Term Air Pollution Exposure, and COVID-19 Susceptibility and Outcomes

Aim: To quantify the association between long-term air pollution exposure and COVID-19 incidence, hospitalization, ventilator use, and mortality.

Total Costs: \$19,988

Role: PI

19-IIA-451 (Whitsel) ALS Foundation 06/01/20-05/31/21

Subcontractor: University of Pittsburgh (Talbot)

Title: The Role of Ambient Air Pollution and Other Environmental and Occupational Exposures and Risk of ALS: A Nested Case-Control Study (Extension)

Aims: To examine associations between air pollution exposure and amyotrophic lateral sclerosis in a case control study nested within the Women's Health Initiative (WHI) cohort.

Total Costs: \$54,517

Role: PI

AHA-NA (Kucharska-Newton) AHA 06/01/20-05/31/21

Title: An EHR Platform for Studying COVID-19 and its Cardiovascular Impact

Aim: To create an electronic health record-based platform for ongoing algorithmic assessment and reporting of COVID-19 hospitalizations and examining patient characteristics associated with the clinical course and severity of the disease

Total Costs: \$100,000

Role: Investigator

R01-HL148565-02S1 (Whitsel) NIH / NHLBI 06/01/20-05/31/21

Subcontractor: Fred Hutchinson Cancer Center (Reiner)

Title: Clonal Hematopoiesis and COVID-19 in the Women's Health Initiative (Administrative Supplement)

Aims: To assess whether clonal hematopoiesis of indeterminate potential (CHIP) or CHIP-related genetic and inflammatory factors are related to COVID-19 outcomes in a large, racially/ethnically diverse group of aging women at risk.

Role (Effort): MPI

Gillings-NA (Engel, L) Gillings Innovations Labs 06/01/20-05/31/21

Title: Investigating Exposure to Air Pollution and COVID-19 Severity in North Carolina

Aims: To examine associations between spatiotemporally resolved, short- and long-term air pollutant exposures and COVID-19 severity across North Carolina subpopulations defined by targetable and potentially modifiable risk factors.

Total Costs: \$99,997

Role: Investigator

Gillings-NA (Kucharska-Newton) Gillings Innovations Labs 06/01/20-05/31/21

Title: Cardiovascular Disease in COVID-19

Aims: To examine the contribution of reported risk and resilience factors to the severity and clinical course of COVID-19 infections using a scalable, real-time, electronic health records-based monitoring platform.

Total Costs: \$99,894

Role: Investigator

CONTRACTS & GRANTS – COMPLETE

NHLBI-WH-11-10 (Whitsel) NIH / NHLBI 10/15/15-10/14/20

Subcontractor: Wake Forest University (Shumaker)

Title: Women's Health Initiative Extension 2015-2020

Aims: To launch the next generation of cardiovascular health research projects that target older women in the Women's Health Initiative and the environments within which they live.

Total Costs: \$453,487

Role: PI

P01-HD031921 Sub-Project 5096 (Whitsel; Dole) NIH / NICHD 04/01/14-04/30/20
Administration (Harris)

Title: The National Longitudinal Study of Adolescent Health: Wave V

Aims: To conduct a fifth follow-up of participants in the National Longitudinal Study of Adolescent Health.

Total Costs: \$28,932,277

Role: Biology Project PI

19-IIA-451 (Whitsel) ALS Foundation 08/01/18-01/31/20

Subcontractor: University of Pittsburgh (Talbot)

Title: The Role of Ambient Air Pollution and Other Environmental and Occupational Exposures and Risk of ALS

Aims: To examine associations between air pollution exposure and amyotrophic lateral sclerosis in a case control study nested within the Women's Health Initiative (WHI) cohort.

Total Costs: \$54,021

Role: PI

R01-ES025888 (Whitsel) NIH / NIEHS 07/01/17-06/30/19

Subcontractor: University of Southern California (Chen)

Title: Environmental Determinants of Pathological Brain Aging in WHI Memory Studies

Aims: To understand how exposure to ambient air pollution before and during late life influences the neuropsychological processes and mechanistic pathways leading to pathological brain aging.

Total Costs: \$79,736

Role: PI

NA (Cai) NIH / NHLBI 06/01/13-05/31/19

Title: HCHS / SOL Exam 2

Aims: To oversee the acquisition and processing of data from a second examination of participants in the Hispanic Community Health Study / Study of Latinos.

Total Costs: \$30,809,277

Role: Investigator

R01-ES020836 (Whitsel) NIH / NIEHS 08/06/12-04/30/19

Title: Epigenetic Mechanisms of PM-Mediated CVD Risk

Aims: To characterize the temporal associations between short- and long-term exposure to particulate matter air pollution, DNA methylation, and cardiovascular risk factors among an exam site- and race-stratified, randomly selected minority oversample of participants in the Women's Health Initiative clinical trials.

Total Costs: \$3,759,950

Role: PI

U34-AG051418 (Whitsel) NIH / NIA 09/01/15-08/31/18

Subcontractor: Boston University (Murabito)

Title: Identifying Epigenetic Mechanisms Underlying Age-Related Disease Risk in CHARGE

Aim: To characterize the epigenetics of age-dependent disease risk in a consortium of large cohort studies.

Total Costs: \$88,712

Role: PI

R01-HL116900 (Loehr) NIH / NHLBI 07/01/13-06/30/18

Title: The Race-Specific Prevalence of Atrial Fibrillation Measured by 48-Hour Holter

Aims: To investigate the racial paradox of low atrial fibrillation in African Americans despite their adverse risk profile and high rates of stroke, for which atrial fibrillation is a known risk factor.

Total Costs: \$2,732,072

Role: Investigator

R01-AG042794 (Harris) NIH / NIA 04/01/13-03/31/18

Subcontractor: Duke University (Hotz)

Title: Add Health Parent Study: Phase I

Aims: To collect data on the parents of participants in the National Longitudinal Study of Adolescent Health and enable intergenerational examination of risk and health in this context.

Total Costs: \$1,615,240

Role: Investigator

R01-ES020871 (Whitsel) NIH / NIEHS 07/01/12-03/31/18

Subcontractor: Brown University (Wellenius)

Title: Ambient Air Pollution and Incident Stroke

Aims: The objective of this study is to evaluate associations between short- and long-term exposure to ambient particulate matter air pollution and the risk of ischemic and hemorrhagic cerebrovascular events in the Women's Health Initiative and the Health Professionals Follow-Up Study.

Total Costs: \$497,912

Role: PI

NA (Whitsel) FAA 09/01/15-08/31/17

Subcontractor: Boston University (Peters)

Title: Cardiovascular Disease and Aircraft Noise Exposure

Aims: To evaluate the health effects of noise exposure in the Women's Health Initiative clinical trials and observational study cohorts.

Total Costs: \$64,913

Role: PI

- R01-HL103612 (Whitsel) NIH / NHLBI 08/10/11-05/31/17
Subcontractor: U Washington (Psaty)
Title: Prospective Meta-Analyses of Drug-Gene Interactions: CHARGE GWAS Consortium
Aims: The objective of this project is to conduct genome-wide association studies of drug-gene interactions within the Cohorts for Heart and Aging Research in Genomic Epidemiology Consortium (AGES; ARIC; CHS; FHS; HABC; RS) and then to meta-analytically combine results across cohorts.
Total Costs: \$439,755
Role: PI
- R01-HD73342 (Harris) NIH / NICHD 07/24/12-03/31/17
Title: Add Health: A Genotype and Phenotype Resource for the Global Scientific Community
Aims: The objective of this study is to complete genotyping of a nationally representative, ethnically diverse population of participants in the National Longitudinal Study of Adolescent Health (Add Health).
Total Costs: \$3,684,774
Role: Investigator
- 15GPSPG23900001 (Avery) AHA 02/01/15-1/31/17
Title: Pharmacogenomics of Risk Factors for Cardiac Arrhythmias in Global Populations
Aims: To examine genetic modifiers of the association between drugs and ECG predictors of ventricular tachyarrhythmia and atrial fibrillation in three major U.S. racial / ethnic groups.
Total Costs: \$ 500,001
Role: Investigator
- HHSN268201100005C (Couper) NIH / NHLBI 11/15/10-11/14/16
Title: Atherosclerosis Risk in Communities (ARIC) Study - Coordinating Center
Aims: The objectives of this contract extension are to re-examine the ARIC cohort (Visit 5); continue cohort follow-up for cardiovascular events including coronary heart disease (CHD), heart failure (HF), stroke and atrial fibrillation; assess quality and outcomes of medical care for HF risk factors and HF; continue community surveillance of CHD and HF; and provide a platform for ancillary studies, training for new investigators and data sharing.
Total Costs: \$16,391,138
Role: Investigator
- HHSN268201100004C (Heiss Whitsel) NIH / NHLBI 10/01/10-09/30/15
Subcontractor: Wake Forest University (Shumaker)
Title: Women's Health Initiative Extension 2010-2015
Aims: The objective of this study is to launch the next generation of critically important cardiovascular research projects that target older women in the Women's Health Initiative (WHI) cohort and the environments in which they live.
Total Costs: \$631,702
Role: PI
- HHSN268201100046C (Whitsel) NIH/NHLBI 03/01/15-08/31/15
Subcontractor: Emory University (Conneely)
Title: Longitudinal study of DNA methylation as a mediator between age and cardiovascular risk
Aims: To examine the role of DNA methylation as a mediator between age and age-related cardiovascular disease risk factors.
Total Costs: \$53,117

Role: Sponsor / Investigator

13-C-AJFE-BU 002 (Whitsel) FAA 09/1/14-08/31/15

Subcontractor: Boston University (Peters)

Title: Noise Health Research: Cardiovascular

Aims: To evaluate the health effects of noise exposure in the Women's Health Initiative.

Total Costs: \$60,329

Role: PI

R01-ES017794 (Whitsel) NIH / NIEHS 08/01/10-06/30/13 (NCE to 06/30/15)

Title: Modification of PM-Mediated Arrhythmogenesis in Populations

Aims: The objective of this study is to examine the genetic and environmental factors that influence the observed differential in susceptibility to the arrhythmogenic effects of ambient particulate matter air pollution among Women's Health Initiative clinical trial participants.

Total Costs: \$2,289,037

Role: PI

R01-HD061622 (Shanahan) NIH / NICHD 06/15/10-05/31/15

Title: Genetic Risk, Pathways to Adulthood and Health Inequalities

Aims: The objective of this study is to examine the longitudinal role of genetic, behavioral and social factors in the development of cardiovascular health inequalities among young adults.

Total Costs: \$2,254,111

Role: Investigator

R01-AG033078 (Vizuete) NIH / NIA 03/15/11-02/28/15

Subcontractor: University of Southern California (Chen)

Title: Environmental Determinants of Cognitive Aging in the WHI Memory Study

Aims: The objective of this study is to study environmental influence on brain aging and subsequent risk of cognitive impairment and dementia.

Total Costs: \$481,251

Role: Investigator

HHSN268201100004C (Whitsel) NIH / NHLBI 12/01/13-09/30/14

Subcontractor: USDA Forest Service, PNW Research Station (Donovan)

Title: Lichens, Polycyclic Aromatic Hydrocarbons & Risk Factors for Cardiovascular Health

Aims: The objective of this pilot / feasibility study is to examine associations between polycyclic aromatic hydrocarbon concentrations in lichens and cardiovascular disease risk factors in the Women's Health Initiative.

Total Costs: \$20,000

Role: Sponsor / Investigator

PO2013028376 (Avery) NIH / NHLBI 11/01/12-09/30/13

Title: Pharmacogenomics of Risk Factors for Cardiac Arrhythmias in Global Populations

Aims: To identify genomic regions modifying the association between drugs and ECG predictors of ventricular tachyarrhythmia and atrial fibrillation in 77,000 participants representing the 3 major U.S. race/ethnic groups.

Total Costs: \$30,400

Role: Sponsor / Investigator

R01-HD058535 (Hussey) NIH / NICHD 07/01/08-06/30/13

Subcontractor: University of Michigan (Sastry)
Title: Emerging Disparities in Chronic Disease Risk
Aims: To examine the emergence of chronic disease during the early adult years, focusing in particular on disparities by race/ethnicity, in a nationally representative sample of nearly 17,000 young adults who have been followed since 1994-95 by the National Longitudinal Study of Adolescent Health.
Total Costs: \$781,531
Role: Investigator

HHSN268200625233C (Cai) NIH / NHLBI 09/30/06-03/31/13
Title: Hispanic Community Health Study – Coordinating Center
Aims: To identify the prevalence of and risk factors for diseases, disorders, and conditions in Hispanic populations and to determine the role of acculturation and disparities in the prevalence and development of these conditions.
Total Costs: \$22,571,684
Role: Investigator

OVRP Seed Fund SA-00060779 (Whitsel) Brown University 10/12/12-03/30/13
Title: Estimation of New Traffic-Related Air Pollution Exposures
Aims: The objective of this service agreement is to quantify small-scale spatial variations in traffic exposure using (1) straight-line distances from exam sites and residences to the nearest roadways of various types and when feasible, (2) geographic information systems (GIS)-mapped traffic density assignments at exam sites and residences of participants in the Women's Health Initiative.
Total Costs: \$20,000
Role: PI

R01-ES012238 (Whitsel) NIH / NIEHS 09/08/03-05/31/10
Title: The Environmental Epidemiology of Arrhythmogenesis in WHI
Aims: To study the proarrhythmic mechanisms and contextual features linking ambient air pollution to cardiovascular disease morbidity and mortality in post-menopausal women aged 50-79 years from the 40 clinical centers and their satellites participating in the baseline exam of the Women's Health Initiative clinical trial.
Total Costs: \$2,595,543
Role: PI

R01-HL084425 (Whitsel) NIH / NHLBI 07/01/07-04/30/11
Subcontractor: RAND Corporation (Bird)
Title: Neighborhoods, Women and CHD: A Prospective Study
Aims: To examine the putative effects of behavioral, emotional and social factors on the relationship between the built environment and incident coronary heart disease in approximately 161,000 women aged 50-79 years at baseline who have been followed for up to twelve years by the Women's health Initiative Clinical Trial and Observational Study.
Total Costs: \$153,127
Role: PI

CR-LRP-04 (Whitsel) NIH / NIEHS 06/01/03-05/31/07
Title: Clinical Research Loan Repayment Program award
Aims: To examine the acute proarrhythmic effects of exposure to ambient pollutants and whether these effects are modified by chronic exposure status, neighborhood of residence and disease-specific susceptibility factors for sudden cardiac death.

Total Costs: \$27,401

Role: PI

P01-HD31921 (Mullan Harris) NIH / NICHD 01/01/06-10/31/10

Title: The National Longitudinal Study of Adolescent Health

Aims: To [1] conduct a fourth follow-up interview of the Add Health cohort in 2007-08 when survey respondents will be aged 24-32 and [2] study developmental and health trajectories across the life course of adolescence into young adulthood using an integrative approach that combines social, behavioral, and biomedical sciences in its research objectives, design, data collection, and analysis.

Total Costs: \$36,034,754

Role: Biology Core PI

N01-WH-2-2110 (North) NIH / NCI 08/01/09-01/31/11

Subcontractor: Fred Hutchinson Cancer Research Center

Title: GWA Analysis Resource for WHI Investigators

Aims: To establish a genome-wide association (GWA) analysis resource for Women's Health Initiative Investigators and to conduct GWA studies of WHI minority participants in the SNP-Health Association Resource (SHARe) project.

Total Costs: \$725,780

Role: Investigator

RC-2HL102924-01 (North) NIH / NHLBI 09/30/09-09/29/11

Subcontractor: Ohio State University College of Medicine

Title: Women's Health Initiative Sequencing Project (WHISP)

Aims: To identify and validate putative functional variants for high-priority heart lung and blood phenotypes among participants enrolled in the Women's Health Initiative clinical trial and observational study.

Total Costs: \$1,157,307

Role: Investigator

R01-HD057073 (Hussey) NIH / NICHD 07/01/09-06/30/13

Title: Socioeconomic Disparities in Young Adult Health

Aims: To examine the emergence of chronic disease during the early adult years, focusing in particular on socioeconomic disparities.

Total Costs: \$1,389,818

Role: Investigator

R01-HL080287-04 (Rose) NIH / NHLBI 04/01/05-03/31/10

Title: Effects of Neighborhood SES on CHD Burden in Communities

Aims: To examine the association between neighborhood SES and the incidence and trends in fatal and non-fatal CHD events.

Total Costs: \$1,231,378

Role: Investigator

UNC Small Research Grants (Ferris) UNC CERT, URC & UKC 04/15/07-07/15/07

Title: Urinalysis Findings in the Add Health Wave IV Pre-test Study Participants

Aims: To conduct a pilot study of risk factors for albuminuria in a nationally representative sample of approximately 17,000 young adults aged 24-32 years followed prospectively by the National Longitudinal Study of Adolescent Health since 1994.

Total Costs: \$17,000 (40% UNC CERT; 30% URC; 30% UKC)

Role: Investigator

R01-HL64142-04 (Heiss) NIH / NHLBI 03/01/01-02/28/06

Title: Life Course SES, Social Context and Cardiovascular Disease (no-cost extension)

Aims: To identify and quantify explanatory mechanisms for the association of historical and contemporary socioeconomic status with cardiovascular disease.

Total Costs: \$1,650,473

Role: Investigator

1-44U-8244 (Rose) DVA 06/01/02-11/30/03

Subcontractor: RTI International

Title: Design of the Cardiovascular Assessment Component of the National Vietnam Veterans Longitudinal Study

Aims: To study the health effects of combat exposure and post-traumatic stress disorder in Vietnam veterans.

Total Costs: \$237,488

Role: Investigator

R01-ES10189 (Heiss) NIH / NIEHS 05/01/00-04/30/03

Subcontractor: PSU-Hershey Medical Center

Title: Cardiovascular Responses to Particulate Air Pollution

Aims: To identify the independent effects of ambient particles (measured by PM₁₀ and TSP) on various cardiovascular responses and relevant clinical end points.

Total Costs: \$70,201

Role: Investigator

R-827994 (Heiss) EPA 01/10/00-01/09/03

Subcontractor: PSU-Hershey Medical Center

Title: Airborne Particulate Matter Health Effects: CV Responses to Particulate Air Pollution

Aims: To investigate the independent cardiovascular effects from the gaseous pollutants CO, NO₂, SO₂, and O₃, and to investigate the synergistic interaction between ambient air pollutants (PM₁₀ and TSP) and each of the gaseous criteria pollutants.

Total Costs: Not Funded

Role: Investigator

NA (Heiss) UNC Dept Epid Trust 07/01/01-06/30/02

Title: ECG Repeatability Study

Aims: To assess the repeatability and validity of short and ultra-short electrocardiographic measures of cardiac autonomic tone in a population of healthy, fasting white and black men and women between 45 and 64 years of age.

Role: Investigator

T32-HL07055 (Heiss) NIH / NHLBI 09/07/00-09/06/02

Title: Cardiovascular Epidemiology Training Grant

Aims: To train active investigators with substantive knowledge and research skills in the area of cardiovascular epidemiology.

Total Costs: \$321,532

Role: Post-doctoral Fellow

T32-HL07055 (Heiss) NIH / NHLBI 05/17/93-05/16/95

Title: Cardiovascular Epidemiology Training Grant

Aims: As above.
Total Costs: \$199,568 (92-93) \$200,329 (93-94)
Role: Post-doctoral Fellow

NA (Whitsel) Holderness Fellowship Program 1990-1991
Title: Holderness Medical Fellowship
Aims: The main objective of this study was to study vagal afferent modulation of the digastric muscle reflex in rats and cats and effects of baroreceptor activation on cortical evoked potentials in the rat.
Role: Pre-doctoral Fellow

PROFESSIONAL SERVICE – EXPERT COMMITTEE

Environmental Working Group, TOPMed (Lead)	2021-
Southeastern Regional Center Leadership Committee, WHI	2020-2021
Scientific Innovation Committee, WHI	2020-2021
Environmental Working Group, ARIC	2019-2021
CHD Morbidity and Mortality Classification Committee, ARIC (Lead)	2002-2021
Physical & Built Environment Scientific Interest Group, WHI Extension (Lead)	2010-2021
Ancillary Studies Committee, WHI & Add Health	2010-2021
Epigenetics Working Groups, ARIC & CHARGE	2014-2021
Center for Environmental Health and Susceptibility	2014-2021
Working Group, Particulate Matter Integrated Science Assessment, EPA/NCEA	2015-2016
Presentations & Publications Committee, WHI	2014-2016
National Advisory Committee, Add Health	2006-2012
Outcomes Adjudication Committee, WHI	2005-2012
Selection Committee, Sidney Kark Distinguished Teaching Assistant Award	2011
Working Group, Particulate Matter Integrated Science Assessment, EPA/NCEA	2008-2009
Working Group, Research Priorities for Cardiovascular Health of Women, NHLBI	2008
Social & Geographic and Questionnaire Committees, HCHS/SOL	2006-2008

PROFESSIONAL SERVICE – MANUSCRIPT / ANCILLARY STUDY / GRANT REVIEWS

Am J Epidemiol	Indoor Air	Sci Total Environ
Circulation	Int J Health Geogr	The ARIC Study
Diabet Med	J Am Med Assoc	Ctr Environ Hlth & Susceptibility
Environ Health	J Expo Sci Environ Epidemiol	The WHI
Environ Health Perspect	J Occ Environ Med	US Civilian Res & Develop Found
Environ Int	J Thromb Haemost	US Dept Veterans Affairs
Epidemiology	N Engl J Med	US EPA
Health Serv Res	Pharmacogenomics J	
Hypertension	Psychophysiology	

PROFESSIONAL SERVICE – SCIENTIFIC SESSION CHAIRS

Session Chair. New Directions for Environmental Studies in the Women’s Health Initiative. WHI Annual Investigator’s Meeting. Washington, DC. May, 2012.

Co-Moderator. NHLBI Satellite Symposium: Cardiovascular Epidemiology, Biostatistics and Behavioral Medicine Trainee Session. 49th Annual Conference on Cardiovascular Disease

Epidemiology and Prevention –and– Nutrition, Physical Activity and Metabolism. March 10-14, 2009

Co-Moderator. Session IV: Risk Factors. 44th Annual Conference on Cardiovascular Disease Epidemiology and Prevention –and– L. J. Filer Symposium on Prevention of Overweight and its Consequences Beginning in Youth. March 3-6, 2004

CARDIOVASCULAR EPIDEMIOLOGY PEER-LED RESEARCH WORKSHOP

Faculty Advisor: Eric Whitsel
CSQ, Room 4030, 123 West Franklin Street
Monthly-Bimonthly Wednesdays @ 4:00 pm

The Cardiovascular Epidemiology Peer-Led Research Workshop (2005-2021). CV Epid Peer-Led celebrated its fifteenth anniversary in 2020. The hour-long workshop is a voluntary meeting of masters, doctoral and post-doctoral trainees in epidemiology and other disciplines who share interest in the epidemiology of cardiovascular disease. It is held monthly-bimonthly on Wednesdays at 4:00 in the CSQ 4002 Conference Room (or via Zoom) during the fall and spring semesters. The dual goal of the workshop is to promote interaction among CV Program trainees at all levels and to provide a forum for group discussion of the methodological, substantive and practical issues relevant to their research, all in a relatively informal setting. Discussion format varies with preference of the group and each topic, but is often preceded by work-in-progress presentations, focused methods lectures, journal article reviews, poster critiques, or panel discussions. **Rotating Coordinators (2020-2021):** Chris Moore (chris_moore@unc.edu) and Alvin Thomas (alvin@unc.edu). **Faculty Advisor (2005-2021):** Eric Whitsel (eric_whitsel@unc.edu)

2020-2021 Schedule

September 16, 2020	Anti-Racism Listening Session	Dr. Deborah Stroman
October 7, 2020	Qualtrics Survey Re: Anti-Racism Listening Session	Alvin Thomas
	Introduction to Peer-Led Teams	Chris Moore
	<u>AHA Epi/Lifestyle Abstract Review</u>	
	Dynamic relationships between body fat and adipokine levels from adolescence to young adulthood: The Santiago Longitudinal Study	Daeun Kim
	Association of Lung Function in Mid-Life with Central Artery Stiffness Later in Life: The Atherosclerosis Risk in Communities (ARIC) Study	Kennedy Peter
November 4, 2020	Casual Check-in & Conversations	Chris Moore Alvin Thomas
February 3, 2021	<u>One-Slide Student Research Roundtable</u>	
	Multi-omic approach to identify causal loci and biomarkers for cognitive resilience	Alvin Thomas
	Decomposition of cognitive resilience by its genetic and environmental drivers	
	Methylome-wide association of domains socioeconomic status and type diabetes among African Americans	Tay Glover
	Omics signatures of aircraft noise	Jason Collins
	Radon, clonal hematopoiesis of indeterminate potential & stroke	
	Multi-ethnic GWAS and fine-mapping of glycemic traits in the Population Architecture using Genomics and Epidemiology (PAGE) Study	Carolina Downie
	APOL1 high risk genotypes & metabolomics	Alice Zhang
	Anal fistula systematic literature review	
	Lysosomal storage disease trials	
	Associations of Step Volume and Stepping Intensity with CVD in the Women's Health Study	Chris Moore
February 22, 2021	Doctoral Practicum & Methods QE Prep	Chris Moore

		Alvin Thomas
March 15, 2021	Open-forum Check-in with Peers	Chris Moore Alvin Thomas
March 29, 2021	CV T32 Website Update: Addition of a Student Blog	Kennedy Peters
	Finding, Applying, and Surviving a TAship	Jason Collins Bailey DeBarmore
April 19, 2021	<u>AHA Epi/Lifestyle Poster Presentations</u> High Polygenic Risk Scores for SBP are Associated with Increased Risk of HF in the WHI Study	Eugenia Wong
	Dynamic relationships between adiposity and circulating adipokine levels from adolescence to young adulthood: The Santiago Longitudinal Study	Daeun Kim
May 3, 2021	<u>Early Career Faculty Panel Discussion</u>	Chris Moore Alvin Thomas
	<u>Panelists</u> Priya Palta Assistant Professor, Epidemiology (Columbia) John Bellettiere Assistant Professor, Epidemiology (UCSD) Rahul Gondalia Senior Epidemiologist (IQVIA) Michelle Meyer Research Assistant Professor, Emergency Medicine (UNC)	

2019-2020 Schedule

September 13, 2019	Welcomes, Introductions & Icebreakers	Jason Collins Eugenia Wong
September 27, 2019	New Student Survival Tips Handling Missing Data Abstract Writing	All Jason Collins Eric Whitsel
October 11, 2019	<u>ASHG Poster Review:</u> Resilience to polygenic risk of severe obesity: The HCHS/SOL	Victoria Buchanan
	<u>AHA Epi/Lifestyle Abstract Reviews:</u> Longitudinal Association between Frailty and Arterial Stiffness in Community-dwelling Older Adults: The Atherosclerosis Risk in Communities Study	Alvin Thomas
	Aircraft Noise Exposure as a Novel Risk Factor for Clonal Hematopoiesis of Indeterminate Potential	Jason Collins
	Methylome-wide Association of DNA Methylation and Aircraft Noise Exposure in the Women's Health Initiative	Jason Collins
November 8, 2019	Hand-me-down Case-Control Studies, Electives & Everyday Ethics in Epidemiology	Jason Collins
December 6, 2019	CV Cohorts and Manuscript Proposals	Eugenia Wong
January 24, 2020	<u>Research Roundtable</u>	All

February 7, 2020	Reproducibility in Research Mini-Workshop	Matt Tsilimigras Annie Green
February 26, 2020	<u>AHA Epi/Lifestyle Poster Reviews</u> Dimensions of Discrimination, Coping Responses to Discrimination and Leukocyte Telomere Length among African Americans: Jackson Heart Study	LáShauntá Glover
	Investigation of Radon as a Risk Factor for Clonal Hematopoiesis of Indeterminate Potential (CHIP) in WHI-TOPMed	Kurt Anthony
	Aircraft Noise Exposure as a Novel Risk Factor for Clonal Hematopoiesis of Indeterminate Potential in WHI-TOPMed	Jason Collins
	Low Liver Enzymes and Dementia. The Atherosclerosis Risk in Communities Neurocognitive Study (ARIC-NCS)	Yifei Lu
March 27, 2020	Maintaining a Professional On-line Presence	Alvin Thomas Bailey DeBarmore
April 10, 2020	Demystifying the Cardiovascular Qualifying Examination	Gerardo Heiss
2018-2019 Schedule		
September 20, 2018	Peer-Led Orientation / Get-to-Know You	Chani Hodonsky Heather Highland
October 11, 2018	<u>American Heart Association Abstract Review:</u> Genetic Correlates of Resilience among African-American Families from the Jackson Heart Study	Tay Glover
	<u>American Society of Human Genetics Poster Review:</u> Genetics of Cardiovascular Disease Risk Factors in the Tsimané	Heather Highland
November 1, 2018	<u>Research Roundtable</u> Aircraft Noise and DNA Methylation in the Women's Health Initiative	Jason Collins
	Miniaturized Electrocardiography: Afib Detection & HRV Measurement Using KardiaMobile Technology	Eric Whitsel
December 10, 2018	Exam Week Coffee Break!	All
January 24, 2019	How to Review a Manuscript	Gerardo Heiss
February 14, 2019	American Heart Association Poster Review The Benefits of Preemptive Transplant Vary by Cause of End-Stage Renal Disease	Alvin Thomas
March 28, 2019	Non-core Epidemiology Courses @ UNC	Chani Hodonsky

2017-2018 Schedule

August 25, 2017	Kick-off Introductions & Research Roundtable	Bailey DeBarmore Antoine Baldassari
September 1, 2017	A Career in Academia: Tips for Success from the UNC Office of Postdoctoral Affairs	Alan Farber
September 15, 2017	Positive Psychology and Cardiovascular Health Positive Emotions & Psychophysiology Lab	Barbara Fredrickson
September 22, 2017	Big No-No's to Avoid in Science Communication The IMPACTS Program	Amy Sayle, Alumnus Morehead Planetarium Educator
September, 29 2017	<u>AHA Epi/Lifestyle Abstract Reviews</u> Workplace Facilities and Policies Associated With Bicycling to Work Among Adults	Anna Porter
	Methylome-wide Association Study Provides Evidence of Particulate Matter Air Pollution-associated DNA Methylation at Cardiovascular Disease-related Genes	Rahul Gondalia
	A Multi-pollutant, Multi-ethnic, and Methylome-wide Association Study Highlights Epigenetic Effects of Exposure to Ambient Air Pollution Mixtures	Antoine Baldassari
October 6, 2017	AHA Epi/Lifestyle Abstract Reviews	Pre- & Post-doctoral Trainees
October 27, 2017	CV Epi Peer-led Research Roundtable	Pre- & Post-doctoral Trainees
November 3, 2017	Public Investment in Science	Kate Saylor Department of Public Policy
November 17, 2017	Time Series / Adherence Data	Ryan Hickson
	2017 Hypertension Guidelines	Bailey DeBarmore
February 2, 2018	<u>AHA Epi/Lifestyle Poster Review</u> Insulin resistance indexes and lower heart rate variability in older adults: the ARIC study	Anna Poon
March 3, 2018	<u>AHA Epi/Lifestyle Rapid Fire Talk Practice Session</u> Comparative Effectiveness of Blood Pressure Lowering Approaches: Results from a Network Meta-Analysis	Jingkai Wei
March 3, 2018	<u>AHA Epi/Lifestyle Poster Review</u> Evaluation of Analytic Approaches to Address Ceiling Effect in Patient-Reported Functional Status After Stroke	Bailey DeBarmore
April 6, 2018	Who's Still Smoking and Why?	Eric Whitsel
April 27, 2018	Real-World Laboratory Challenges: Cystatin C Calibration	Eric Whitsel
2016-2017 Schedule		
August 26, 2016	Orientation to the CV Epidemiology Program	Carmen Cuthbertson Jingkai Wei

September 16, 2016	Batting 300 is Good: Resilience in Research	Christy Avery
September 30, 2016	<u>American Heart Association Epi/Lifestyle Scientific Sessions Abstract Review #1:</u>	
	Modifying General and Central Adiposity: Estimated Effect on Population Burden of Coronary Heart Disease: The ARIC Study	Kapuaola Gellert
	Mitochondrial DNA Copy Number and Diabetes in the ARIC Study	Bailey DeBarmore
October 7, 2016	<u>American Heart Association Epi/Lifestyle Scientific Sessions Abstract Review #2:</u>	
	Trans-ethnic Genetic Analysis of Admixed U.S. Populations Identifies Novel Associations with Mean Corpuscular Volume	Chani Hodonsky
November 4, 2016	The CV Epid Substantive QE: Debriefing and Preparation Strategy	Eric Whitsel
November 18, 2016	<u>University of Cambridge Visiting Professor Lecture Cardiovascular Disease Risk Prediction: Emerging Risk Markers</u>	Peter Willeit
December 2, 2016	Panel Discussion: Preparing for the Dissertation Proposal	Anna Poon Ricky Camplain Sydney Jones
January 13, 2017	Managing Up	Christy Avery
February 3, 2017	<u>Eminence-Based CV Epidemiology and the 2013 ACC/AHA Blood Cholesterol Guideline</u>	Eric Whitsel
February 24, 2017	<u>American Heart Association Epi/Lifestyle Scientific Sessions Poster Review:</u>	
	Dose-response Relationship between Dietary Intake of α -Linolenic Acid and Risk of Coronary Heart Disease: A Meta-Analysis of Prospective Studies	Jingkai Wei
	Glucose, Insulin Resistance and Exposure to Ambient Air Pollution	Rahul Gondalia
	Lipid-related Genetic Variants and Lipid Outcomes in a Cohort of Chilean Children	Ann Von Holle
April 7, 2017	American Heart Association Epi/Lifestyle Scientific Sessions Recap & Discussion	Wayne Rosamond
April 28, 2017	Effective Networking & Use of LinkedIn from the UNC Career Services Perspective	Amy Blackburn

2015-2016 Schedule

August 28, 2015	Introductions, Overview, Expectations & Discussion	Joseph Engeda Rahul Gondalia
September 18, 2015	Communicating Research Results	Joseph Engeda

		Rahul Gondalia Eric Whitsel
September 25, 2015	<u>Epi / Lifestyle 2016 Abstract Review</u> Isotemporal Substitution Models of Daily Physical Activity and Cardiometabolic Disease among South Asians in the CARRS Surveillance Study	Jingkai Wei
	The Relationship Between the Triglyceride to High-density Cholesterol Ratio as a Measure of Insulin Resistance and Incident Coronary Heart Disease	Dmitry Kats
	Genes Regulating Electrolyte Transport in a Large, Multi-ethnic, Pharmacogenomics Study of Thiazide Diuretics and QT interval	Amanda Seyerle
October 2, 2015	<u>Epi / Lifestyle 2016 Abstract Review</u> Agreement Between Self-reported and Physician Confirmed Heart Failure among Older Adults: the Atherosclerosis Risk in Communities (ARIC) Study	Ricky Camplain
	Association of Measures of Insulin Resistance with Carotid-femoral Pulse Wave Velocity: the Atherosclerosis Risk in Communities (ARIC) Study	Anna Poon
	The Association of Postprandial Lipemia with Cardiovascular Disease Outcomes in the Atherosclerosis Risk in Communities (ARIC) Study	Dmitry Kats
	Association of Arterial Stiffness and Pressure Amplification with Cognitive Impairment and Dementia: the Atherosclerosis Risk in Communities Study - Neurocognitive Study (ARIC-NCS)	Michelle Snyder
	Habitual Milk Intake and 20-year Cognitive Decline in the ARIC-NCS Cohort	Natalia Petruski-Ivleva
October 30, 2015	Ethical Concerns in Past, Current, and Future Research	Charlotte Coley Carter Church (UNC IRB)
December 4 , 2015	Rigor and Reproducibility	Gerardo Heiss Joseph Engeda Rahul Gondalia
January 29, 2016	Welcome-Back Breakfast What to Expect This Semester (Classes; QEs)	All
February 5, 2016	<u>AHA Epi / Lifestyle 2015 Poster Review #1</u> Repeatability of Ectopic Beats From 48-hour Ambulatory Electrocardiography: The Atherosclerosis Risk in Communities (ARIC) Study	Michelle Meyer
	Association of Arterial Stiffness and Pressure Amplification with Mild Cognitive Impairment and Dementia: The Atherosclerosis Risk in Communities Study - Neurocognitive Study (ARIC-NCS)	Michelle Meyer
	A Novel Index of Insulin Resistance and Segment-specific Pulse Wave Velocity: The Atherosclerosis Risk in Communities (ARIC)	Anna Poon

	Study	
	The Triglyceride to High-density Lipoprotein Cholesterol Ratio, an Estimate of Insulin Resistance, is Associated with Incident Coronary Heart Disease. The Atherosclerosis Risk in Communities (ARIC) Study	Dmitry Kats
February 19, 2016	<u>AHA Epi / Lifestyle 2015 Poster Review #2</u> Isotemporal Substitution Modeling of Daily Physical Activity Intensity and Cardiometabolic Diseases Among South Asians: The Centre for Cardiometabolic Risk Reduction in South-Asia (CARRS) Study	Jingkai Wei
	Generalization and Fine Mapping of Genetic Associations with Hematocrit in Multi-ethnic Populations: The Population Architecture Using Genomics and Epidemiology (PAGE) Study	Chani Hodonsky
	Arterial Stiffness and Pressure Amplification Associated with Markers of Cerebral Microvascular Disease: The Atherosclerosis Risk in Communities Neurocognitive Study (ARIC-NCS)	Priya Palta
	Association of Habitual Milk Intake with Cognitive Decline From Mid-life to Late-life: The Atherosclerosis Risk in Communities (ARIC) Neurocognitive Study (NCS)	Natalia Petruski-Ivleva
	Accuracy of Self-reported Heart Failure Following a Hospitalized Heart Failure Event: The Atherosclerosis Risk in Communities (ARIC) Study	Ricky Camplain
March 25, 2016	CVD Pathology: Morgue Edition	Jon Homeister (Department of Pathology)
April 1, 2016	Discussing Research Results with the Public & Media	David Pesci (Director of Communications, SPH)
April 22, 2016	Working in the Non-Academic Sector	Keri Monda (Amgen) Emily Shroeder (Kaiser) Corey Kalbaugh (Quintiles)

2014-2015 Schedule

August 22, 2014	Introductions, Overview, Expectations & Discussion	Priya Palta Shelly-Ann Love
September 5, 2014	Smoking Behavior and Pulse Wave Velocity	Ricky Camplain
September 19, 2014	<u>Epi / Lifestyle 2015 Abstract Review</u> Misclassification of Incident Heart Failure Hospitalizations in Administrative Claims Data: The ARIC Study	Ricky Camplain
	Discovery Loci and High Generalization of Platelet Count Associations in Hispanics from the HCHS-SOL Study	Chani Hodonsky
	Trajectories of Weight Gain in the Hispanic Community Health Study / Study of Latinos (HCHS / SOL)	Lindsay Fernandez-Rhodes

	Genome-wide Association Study of the PR Interval in Hispanic Populations	Amanda Seyerle
	Reliability of Pulse wave Velocity in the Atherosclerosis Risk in Communities Study	Michelle Snyder
October 3, 2014	<u>Epi / Lifestyle 2015 Abstract Review</u> Physical Activity and Sedentary behavior Patterns and Cardiovascular Disease Correlates in U.S. Adults	Sydney Jones
	Physical Activity from Midlife to Older Adulthood: The Atherosclerosis Risk in Communities Study	Dmitry Kats
	Subclinical Atherosclerosis and 20-year Cognitive Decline: ARIC-NCS	Shelly-Ann Love
	Neighborhood Socioeconomic Position and Physical Function in Late Life: The Atherosclerosis Risk in Communities Study	Priya Palta
	Longitudinal Patterns of Change in Systolic Blood Pressure (SBP) and Incidence of Cardiovascular Disease: The ARIC Study	Natalia Petruski-Ivleva
	Association of the Metabolic Syndrome with Pulse Wave Velocity: The ARIC Study	Anna Poon
	Childhood BMI Associated With Low HDL-c Levels in Adolescence In A Chilean Cohort	Ann Von Holle
November 7, 2014	<u>Certificates of Confidentiality</u> –The Northern Ireland Oral History Case	Eric Whitsel
	<u>Tiered Consent</u> - The Havasupai Indian Tribe Case	Priya Palta
November 21, 2014	Scientific Writing	Bill Miller
December 5, 2014	Population Impact of Adiposity on Peripheral Artery Disease Burden in African Americans and Whites: An Application of the Parametric G-Formula	Kapuaola Gellert
January 16, 2015	Panel on Navigating the Dissertation Process Pearls of Wisdom from Senior Cardiovascular Epidemiology Students	Magdalene Assimon Katie Holliday Corey Kalbaugh Ada Al Qunaibet Kapuaola Gellert Sara Jones Catherine Vladutiu
January 30, 2015	<u>CVD Morbidity & Mortality Conference</u> A 78 year old female dying of an unknown cause Case ascertainment in cohort & surveillance studies	Eric Whitsel
February 6, 2015	<u>Epi / Lifestyle 2015 Poster Review</u> Titles from September 19 & October 3 (above)	Ricky Camplain Chani Hodonsky Anna Poon
February 20, 2015	<u>Epi / Lifestyle 2015 Poster Review</u>	

	Titles from September 19 & October 3 (above)	Sydney Jones Dmitry Kats Priya Palta Amanda Seyerle
	Repeatability of Automated Determinations of the Ankle Brachial Index The Atherosclerosis Risk in Communities (ARIC) Study	Ada Quinaibet
	Genetic Susceptibility to Particulate Matter-Associated QT Prolongation in a Trans-Ethnic Genome-Wide Association Study	Rahul Gondalia
March 27, 2015	Regulatory science at the Food and Drug Administration	Daniel Caños (Alumnus) Associate Director Surveillance & Biometrics
April 17, 2015	Introversion in Science	Priya Palta Eric Whitsel
May 1, 2015	Academic and Non-Academic Careers in Epidemiology	Kathy Rose (Alumnus) Social & Scientific Systems Sara Ephross (Alumnus) PAREXEL International

2013-2014 Schedule

August 21, 2013	Introductions and Student Expectations	Sydney Jones Mandy Seyerle Wayne Rosamond
September 25, 2013	AHA Abstract Workshop	
	Validity of Hospital Discharge Diagnosis Codes for Stroke: Evaluation of New American Heart Association/American Stroke Association Definitions	Sydney Jones
	Fine mapping of previously identified waist-to-hip ratio loci in African-American populations: The Population Architecture using Genomics and Epidemiology (PAGE) Study	Sachiko Yoneyama
	Age-Specific Probabilities of Transitioning between Ideal, Intermediate, and Poor States of Physical Activity in the United States	Katie Holliday
	Reduced Heart Rate Variability is Associated with Gender and Cardiovascular Risk Factors in the Hispanic Community Health Study/Study of Latinos (HCHS/SOL)	Michelle Snyder
	Generalization and fine mapping of PR interval loci in Hispanics: the Population Architecture using Genomics and Epidemiology (PAGE) Study	Amanda Seyerle
	Associations between echocardiographic arterial compliance and Incident cardiovascular disease in African Americans: The ARIC Study	Melissa Caughey
October 23, 2013	Research Ethics and “ <i>The Immortal Life of Henrietta Lacks</i> ”	Sydney Jones

		Mandy Seyerle
November 20, 2013	Authorship, ICJME Recommendations & Peer Review	Wayne Rosamond
January 28, 2013	Designing New CVD Prevention Efforts: The Polypill	Anthony Viera Eric Whitsel
March 5, 2014	<u>AHA Oral / Poster Practice Session:</u>	
	Cumulative abdominal obese-years and arterial stiffness in older adults: The ARIC study	Priya Palta
	Arterial stiffness and retinal vessel diameters: The ARIC-NCS study	Michelle Snyder
	Time since smoking cessation and pulse wave velocity: The ARIC study	Ricky Camplain
	Generalization and fine mapping of PR interval loci in Hispanics: The PAGE study	Amanda Seyerle
	Associations between echocardiographic arterial compliance and incident cardiovascular disease in African Americans: The ARIC study	Melissa Caughey
	Validity of hospital discharge diagnosis codes for stroke: Evaluation of new AHA / ASA definitions	Sydney Jones
March 25, 2014	Grant Proposal Writing	Senior Students
April 22, 2014	Non-Academic Career Paths from the Perspective of Alumnae	Annie McNeill (Merck) Daniel Caños (FDA)

2012-2013 Schedule

August 27, 2012	Getting Oriented	Sara Jones Corey Kalbaugh Sachi Yoneyama
October 1, 2012	Abstract Writing Workshop	Corey Kalbaugh Sachi Yoneyama
November 12, 2012	Ethics Case Studies	Sara Jones Corey Kalbaugh Sachi Yoneyama
December 3, 2012	ARIC Community Surveillance	Wayne Rosamond
January 28, 2013	Designing New CVD Prevention Efforts: The Polypill	Anthony Viera Eric Whitsel
February 25, 2013	<u>AHA Oral Practice Session:</u> Impact of shifting population distributions of blood pressure on	Shakia Simmons

rates of coronary heart disease, heart failure and stroke: the ARIC Study

March 7, 2013	<u>AHA Poster Practice Session:</u> Diversity in Hispanic Background and Burden of Metabolic Syndrome Abnormalities: A Report from the HCHS/SOL	Michelle Meyer
	Prevalence and Outcomes of Anemia in Patients Hospitalized with Acute Decompensated Heart Failure: ARIC Community Surveillance	Melissa Caughey
	Socioeconomic Status and Patterns of Follow-up Care after Myocardial Infarction in the ARIC Study	Montika Bush
	Development of a Risk Prediction Model for Incident Peripheral Artery Disease Hospitalization: The ARIC Study	Corey Kalbaugh
April 30, 2013	Reliability Studies	Michelle Meyer Kapuaola Gellert

2011-2012 Schedule

September 7, 2011	Orientation	Katelyn Holliday Lindsay Fernández-Rhodes
October 5 2011	Strategies for Improving Question and Answer Sessions Perspectives of a Former Trainee and H.A. Tyroler Lecturer	Katelyn Holliday Lindsay Fernández-Rhodes Donna Arnett
November 18, 2011	Ethics in Cardiovascular Disease	Stuart Rennie
January 11, 2012	Cardiovascular Medications	Eric Whitsel
February 10, 2012	Student Practica and Abstract Writing: Tips on How to Succeed	Kristen Ricchetti-Masterson Katelyn Holliday Lindsay Fernández-Rhodes
March 1, 2012	<u>AHA CVD Epidemiology and Prevention Poster / Oral Presentations:</u> Incidence of Hospitalized Peripheral Arterial Disease and Critical Limb Ischemia: The Atherosclerosis Risk in Communities (ARIC) Study Generalization of Adiposity-Related Common Genetic Variants among U.S. Hispanic Women in WHI-SHARe Post-Stroke Outcomes Vary by Etiologic Subtype in the Atherosclerosis Risk in Communities (ARIC) study	Corey Kalbaugh Lindsay Fernandez-Rhodes Sara Jones
April 24, 2012	The Curriculum Vitae and Planning for 2011-2012	Katelyn Holliday Lindsay Fernández-Rhodes

2010-2011 Schedule

September 8, 2010	Organization of the semester Research Ethics in Cardiovascular Disease	Emily O'Brien Peter Samai
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October 6, 2010	Collaboration in Epidemiology	Gerardo Heiss Marilie Gammon Ka He
October 27, 2010	Keeping the file drawer open	Eric Whitsel
December 10, 2010	Chagas and HAART in Cardiovascular Disease	Ross Simpson
November 17, 2010	(Re-)Launch of CVD Epidemiology Journal Club “Life-Course Analysis of a Fat Mass and Obesity-Associated (FTO) Gene Variant and Body Mass Index in the Northern Finland Birth Cohort 1966 Using Structural Equation Modeling”	Mehul Patel Anna Newton
January 18, 2011	Keeping Current: MyNCBI	Lara Handler HSL Librarian
February 9, 2011	The Basics of Structural Equation Modeling for Epi Research	Catherine Zimmer
March 3, 2011	Jobs in Academia, the Trainee-Faculty Transition, Working in Departments of Preventive Medicine & Early Career Challenges	David Shoham
March 16, 2011	<u>AHA CVD Epidemiology and Prevention Poster / Oral Presentations:</u> Substitution of the Composition of Serum Fatty Acids and Ischemic Stroke Among Postmenopausal Women FTO Variant and Age at Menarche Simultaneously Predict Measures of Obesity in Young and Late Adulthood Factors Associated with Rehabilitation Discharge Destination after Acute Stroke Hospitalization: The North Carolina Stroke Care Collaborative	Sirin Yaemsiri Lindsay Fernandez-Rhodes Emily O’Brien

2009-2010 Schedule

September 16, 2009	Organization of the semester Access to and use of NHANES and ARIC data Extramural summer research experiences of CVD students	Sirin Yaemsiri Christy Avery Group
October 7, 2009	The analysis of variance and the analysis of causes (Lewontin) Tips for saving time & increasing efficiency	Ashley Naimi Group
October 28, 2009	Networking and interviewing skills	Amy Hitlin Director, UNC SPH Career Services
December 2, 2009	Sigmaplot and Photoshop tutorial	Christy Avery
January 20, 2010	Negotiating a job offer	Randi Foraker
February 3, 2010	Preventing and identifying data fabrication	Eric Whitsel
February 10, 2010	Presentation skills	JoAnna Williamson
February 17, 2010	<u>AHA CVD Epidemiology and Prevention posters:</u> Neighborhood socioeconomic status and rehospitalization rates following an incident heart failure hospitalization: Atherosclerosis Risk in Communities Cohort, 1987-2005 Clinical outcomes among ischemic stroke patients receiving	Randi Foraker Emily O’Brien

	tissue plasminogen activator therapy outside of the recommended time window: The North Carolina Stroke Care Collaborative	
April 22, 2010	Top 10 publishing tips from an editor's point of view	Jane Schroeder Science Editor EHP
May 13, 2010	The year in review: Workshop wrap-up and planning for next year	Sirin Yaemsiri Christy Avery
June 10, 2010	<u>Society for Epidemiologic Research, practice session I:</u> Multiple loci associated with factor VII levels in European and African americans from the Candidate Gene Association Resource (CARE) consortium	Kira Taylor
	Utility of childhood glucose homeostasis variables in predicting adult diabetes and related cardiometabolic risk factors: the Bogalusa Heart Study	Quoc Nguyen
	Hospital and patient factors associated with defect-free care in acute stroke patients: The North Carolina Stroke Care Collaborative (NCSCC)	Emily O'Brien
June 15, 2010	<u>Society for Epidemiologic Research, practice session II:</u> Predictors of alcohol consumption among U.S. men who have sex with men	Petra Sander
	Historical records as a source of childhood socioeconomic status: feasibility and data quality	Cindy Owens
	Spatiotemporal analysis of incident myocardial infarction and neighborhood socioeconomic status	Mehul Patel

2008-2009 Schedule

September 24, 2008	Organization of the semester	Mehul Patel Anna Newton
	Reviewing manuscripts & responding to reviews	Eric Whitsel
October 22, 2008	Non-academic summer internships & jobs NIEHS NYC Health Department Merck FDA	Tiana Garrett Sirin Yaemsiri Mehul Patel Daniel Canos
November 5, 2008	The evolution of evidence-based practice: A brief history and reflection	Sue Tolleson-Rinchart
December 10, 2008	ARIC Surveillance	Wayne Rosamond
February 11, 2009	Socioeconomic indicators and the risk of sudden cardiac death; a cross-national comparison of population-based data from United States and Finland	Anna Newton
	Socioeconomic status and cardiac diagnostic testing during an index heart failure hospitalization: the ARIC study	Randi Foraker
February 18, 2009	Premature ventricular complexes and the risk of sudden and non-sudden cardiac death: the ARIC study	Sunil Agarwal

	Disagreement between presumptive and final hospital diagnoses: The North Carolina Collaborative Stroke Registry (NCCSR)	Emily O'Brien
	Incorporating spatial autocorrelation in models of the association between neighborhood socioeconomic status and incident hospitalized myocardial infarction: the ARIC study	Mehul Patel
February 25, 2009	The art and ache of scientific writing	Eric Whitsel
April 22, 2009	Reference management	Sunil Agarwal
	Recap of the semester, planning for next year	Anna Newton Mehul Patel

2007-2008 Schedule

September 12, 2007	Organizational meeting	Randi Foraker Kristal Raymond Daniel Canos
October 10, 2007	Receiver operating characteristic (ROC) curves: Risk prediction	Woody Chambless
November 14, 2007	Cluster analysis	Keri Monda
December 5, 2007	To bootstrap or not?...That is the question	Ahinee Amomoo
February 13, 2008	Neighborhood socioeconomic status and treatment of myocardial infarction: Atherosclerosis Risk in Communities (ARIC) study	Randi Foraker
	Life course socioeconomic conditions and metabolic syndrome in adults: The Atherosclerosis Risk in Communities (ARIC) study	Kristal Raymond
	Cumulative socioeconomic position from early childhood to mid adulthood and incident hospitalized heart failure in blacks and whites: The ARIC study	Calpurnia Roberts
February 20, 2008	Long term prediction of heart failure hospitalization: The Atherosclerosis Risk in Communities (ARIC) study	Katherine Mills
	Pesticides and Myocardial Infarction Incidence and Mortality Among Male Pesticide Applicators in the Agricultural Health Study	Katherine Mills
	Benign prostate hypertrophy: Is it a component of metabolic syndrome?	Sunil Agarwal
	Diabetes and the risk of sudden cardiac death: The Atherosclerosis Risk in Communities study	Anna Kucharska-Newton
	Markers of inflammation and hemostasis and the risk of sudden cardiac death: The Atherosclerosis Risk in Communities study	Anna Kucharska-Newton
March 17, 2008	UNIX-based statistical applications	Christy Avery
April 2, 2008	Overview of structural equation modeling	Catherine Zimmer

April 16, 2008	Add Health Waves I to IV: Data availability, access and analysis	Eric Whitsel
April 23, 2008	Competing risks	Anna Kucharska-Newton
	Peer-Led CVD Epid Workshop review 2007-8 / preview 2008-9	Randi Foraker Kristal Raymond Daniel Canos

2006-2007 Schedule

October 4, 2006	Organizational Meeting	Calpurnyia Roberts
October 18, 2006	Television watching, physical activity and diet: The ARIC study	Anne-Marie Meyer
	Diabetes-specific genetic effects on obesity traits in American Indian populations: The Strong Heart Family study	Nora Franceschini
November 8, 2006	CHD and incidence of post-menopausal breast cancer: role of obesity	Anna Newton
	Grant writing: The good, bad, and ugly	Panel
December 6, 2006	B-Splines and proportional hazard models	Daniel Canos Christy Avery
January 24, 2006	Grant applications for EPID 767	Randi Foraker Kristal Raymond
February 7, 2007	Neighborhood socioeconomic status, health insurance, and pre-hospital delay time for acute myocardial infarction: Atherosclerosis Risk in Communities (ARIC) surveillance	Randi Foraker
	UGT2B15 variants, tobacco exposure, and CHD: the Atherosclerosis Risk in Communities (ARIC) study	Yu Yan
	HDL-cholesterol: Is it also a risk factor for lung cancer? The Atherosclerosis Risk in Communities (ARIC) study	Anna Newton
February 13, 2007	The association between mortality following initial hospitalization for heart failure and SES in whites and blacks: The ARIC study	Calpurnyia Roberts
	LDL receptor diplotypes main effects and interaction with apolipoprotein E polymorphisms on carotid artery wall thickness: The Atherosclerosis Risk in Communities study	Nora Franceschini
March 28, 2007	When is baseline adjustment useful in analyses of change?	David Shoham Anne-Marie Meyer
April 4, 2007	Sample size and statistical power / Using simulations to obtain sample size	David Couper
April 25, 2007	Physical activity and cardiovascular disease	Katja Borodulin

Debriefing

Calpurnya Roberts

2005-2006 Schedule

October 5, 2005	Organizational Meeting	Melissa Hagan
October 19, 2005	Black-White Differences in Risk Factors for Incident Hospitalized Heart Failure	Laura Loehr
November 16, 2005	Capture-Recapture Estimates of Disease Frequency	David Shoham
December 14, 2005	The Association between Life Course Socioeconomic Status and Heart Failure in the Atherosclerosis Risk in Communities (ARIC) Study	Calpurnya Roberts
January 11, 2006	Habitual Dietary Intake of Betaine & Choline and Risk of CHD & Stroke in the Women's Health Initiative (WHI)	Daniel Canos
February 8, 2006	Adequacy and Reliability of the Dietary Intake of Choline & Betaine in Populations: The ARIC study	Aurelian Bidulescu
	Exposure to Combat Stress and Predicted Risk of Coronary Heart Disease in Aging Men: the Life Course SES Study	Anna Johnson
February 15, 2006	Life Course Socioeconomic Status and Sub-clinical Atherosclerosis: The Atherosclerosis Risk in Communities (ARIC) Study	April Carson
	Life-Course Socioeconomic Status, Elevated Fibrinogen Levels in Adulthood, and Mediating Variables	Ricardo Pollitt
March 22, 2006	Socioeconomic Status and the Metabolic Syndrome in the Atherosclerosis Risk in Communities (ARIC) Study	Kristal Raymond
April 19, 2006	Effect Decomposition	David Shoham

TOPMed ENVIRONMENTAL WORKING GROUP

Lead: Eric Whitsel

Fourth Wednesdays 3:00-4:00 pm (Eastern)

The Trans-Omics for Precision Medicine (TOPMed) Environmental Working Group (2021-). The TOPMed Environmental Working Group was established in 2021. Calls are held on the 4th Wednesday of the month at 12:00pm Pacific / 2:00pm Central / 3:00pm Eastern. The goal of the group is to identify and characterize omics signatures of the environment in TOPMed cohorts, their relationships to biological aging, and age-related disease risk. In this setting, “environment” is inclusive, referring broadly both to contextual- and individual-level exposures, as well as their putative interactions. Exposures of potential interest to the group include those in the natural, anthropogenic, built, social, economic, and behavioral domains. **Lead (2021-):** Eric Whitsel (eric_whitsel@unc.edu)

2021 Schedule

03/24/21

Title: Psychosocial Stress, DNA Methylation, and Incident Coronary Artery Disease

Presenter: Anthony Zannas

Affiliation: Departments of Psychiatry and Genetics
Carolina Stress Initiative
Stress, Aging & Epigenetics Bioinformatics / Wet Lab
University of North Carolina (Chapel Hill, NC)

04/28/21

Title: Air Pollution and Measures of Lipid Oxidation in the Multi-Ethnic Study of Atherosclerosis

Presenter: Michael Young

Affiliation: Department of Epidemiology
School of Public Health
University of Washington (Seattle, WA)

06/23/21

Title: Air Pollution-Associated Metabolomic Changes and Bone Mineral Density

Presenter: Diddier Prada-Ortega

Affiliation: Mailman School of Public Health, Columbia University (New York, NY)

08/25/21

Title: Characterizing the Genetic Architecture of Susceptibility and Resistance to Radiation-induced Hematopoietic Injury

Presenters: Liam Cato, Travis Fleming and Vijay Sankaran

Affiliation: Broad Institute, Harvard (Boston, MA)

WHI PHYSICAL & BUILT ENVIRONMENT SCIENTIFIC INTEREST GROUP

Lead: Eric Whitsel

Second Thursdays 4:00-5:00 pm (Eastern)

The Women's Health Initiative Physical and Built Environment Scientific Interest Group (2010-2021). The WHI Environmental SIG celebrated its tenth anniversary in 2020. The Environmental SIG is one of fourteen substantively oriented social networking groups within the WHI. This multi-disciplinary, multi-institutional, and multi-national group usually meets monthly on second Thursdays from 4:00-5:00 pm Eastern via teleconference. Its goal is to optimize development and use of WHI environmental resources (Dial-in: 1-866-618-2448 Passcode: 9920978). Optimization primarily involves stimulating scientific exchange via work-in-progress presentations, but the SIG also encourages and coordinates productive, collaborative study of the environment; advances science by developing innovative exposure data resources / documentation, scientific presentations, publications, and ancillary studies; hosts 60 affiliate WHI data users on a UNC high security data storage and analysis platform (CERES), and provides a variety of other opportunities to engage established and newer-to-WHI scientists with shared interests. **Lead (2010-2021):** Eric Whitsel (eric_whitsel@unc.edu)

2021 Schedule

01/28/21

Title: Comparison of Air Pollution Exposure Assessments Based on Different Modelling Approaches within the Women's Health Initiative (WHI) Cohort

Presenter: Melinda Power

Affiliation: George Washington University Department of Epidemiology and Institute for Brain Health and Dementia

9/30/21

Title: Preliminary Results from a Masked Comparison of Twelve Air Pollution Exposure Models in the Women's Health Initiative Memory Study (WHIMS)

Presenter: Melinda C. Power

Affiliation: Department of Epidemiology, Milken Institute School of Public Health and Institute for Brain Health and Dementia, George Washington University

2020 Schedule

01/09/20

Title: Air Pollution, Medication Use & Bone Health in WHI

Presenter: Diddier Prada

Affiliation: National Cancer Institute, Division of Environmental Health & Biomarkers, Mexico City, Mexico

04/09/20

Title: Initiative on Research Actions & Opportunities in WHI on COVID-19

Presenter: Eric A. Whitsel

Affiliation: University of North Carolina at Chapel Hill, Departments of Epidemiology and Medicine

07/23/20

Title: Investigation of Radon as a Risk Factor for Clonal Hematopoiesis of Indeterminate Potential (CHIP)

Presenter: Kurtis Anthony

Affiliation: Department of Epidemiology, UNC Gillings School of Global Public Health

09/10/20

Title: Epigenetic & Proteomic Signatures of Aircraft Noise Exposure in the Women's Health Initiative

Presenter: Jason M. Collins

Affiliation: University of North Carolina at Chapel Hill, Department of Epidemiology

10/08/20

Title: Association of Individual- and Neighborhood-level Socioeconomic Status and Clonal Hematopoiesis of Indeterminate Potential in the Women's Health Initiative

Presenter: Shelly-Ann Love

Affiliation: University of North Carolina at Chapel Hill, Department of Epidemiology

11/19/20

Title: Psychosocial Stress, DNA Methylation and Incident Cardiovascular Disease

Presenter: Helena Palma-Gudiel, PhD
Affiliation: University of North Carolina, Department of Psychiatry

12/03/20

Title: Air Pollution Adductomics and Liver Cancer Risk
Presenter: Trang VoPham
Affiliation: Fred Hutchinson Cancer Research Center Division of Public Health Sciences, Epidemiology Program

12/10/20

Title: A Proposed Study Exploring the Role of the Social Environment in Understanding Air Pollution Health Effects
Presenter: Anjum Hajat
Affiliation: University of Washington, Department of Epidemiology

12/17/20

Title: Epigenetic Age Acceleration as a Biomarker for MCI, ADRD, and Brain Aging
Presenter: Aladdin Shadyab
Affiliation: University of California, San Diego Department of Family Medicine and Public Health

2019 Schedule

01/10/19

Title: Case-crossover Analysis of Air Pollution and Stroke
Presenter: Darren Sun
Affiliation: Brown University, Institute at Brown for Environment and Society

02/07/19

Title: Epigenetic Mediation of PM-Associated Changes in Heart Rate Variability & QT Interval Duration
Presenter: Rahul Gondalia
Affiliation: University of North Carolina at Chapel Hill, Department of Epidemiology

02/14/19

Title: Examples of & Opportunities for Collaborative Study of Noise Health Effects in WHI
Presenter: Junenette Peters
Affiliation: Boston University, Department of Environmental Health

02/28/19

Title: Adverse Outcomes Pathways Approach to Environmental Exposures & CVD. Virtual Consortium for Translational / Transdisciplinary Environmental Research (ViCTER)
Presenters: Steve Edwards & Kris Young
Affiliations: RTI, International & University of North Carolina, Department of Epidemiology

03/14/19

Title: Cohort Pooling Project: Sub-threshold Health Effects & Dose-response Relationships
Presenters: Sabah Quraishi & Joel Kaufman
Affiliation: University of Washington, Environmental and Occupational Health Sciences, Epidemiology & Medicine

04/11/19

Title: Ambient Air Pollution: A Potential Novel Risk Factor for Age-Related Macular Degeneration
Presenter: Henry Lin
Affiliation: University at Buffalo, Department of Ophthalmology

04/25/19

Title: WHI Participant Address Geocoding Update
Presenters: James Stewart & Eric Whitsel

Affiliation: University of North Carolina, Departments of Epidemiology & Medicine

05/09/19

Title: Epigenetic Associations with Optimism in WHI

Presenter: Dawn Demeo

Affiliation: Harvard Medical School, Channing Division of Network Medicine,

05/16/19

Title: Effect Modification by MIND Diet on the Association between Air Pollution Exposure and Brain Aging

Presenter: Cheng Chen

Affiliation: Indiana University, Department of Epidemiology and Biostatistics

10/24/19

Title: WHI Air Follow-up: Leveraging Multiple Models in Evaluation of Air Pollution Estimation in Areas with Sparse Monitors

Presenter: Melinda Power

Affiliation: Department of Epidemiology, Milken Institute School of Public Health, George Washington University

11/14/19

Title: Neighborhood Socioeconomic Status, Green Space, Walkability and Risk for Fracture among Postmenopausal Women: The Women's Health Initiative

Presenter: Marilyn Wende

Affiliation: University of South Carolina

12/19/19

Title: WHI Air Follow-up 2: Leveraging Multiple Models in Evaluation of Air Pollution Estimation in Areas with Sparse Monitors

Presenter: Melinda Power

Affiliation: Department of Epidemiology, Milken Institute School of Public Health, George Washington University

2018 Schedule

02/22/18

Title: WHI-Sleep and Environmental Predictors of Cognitive and CVD Outcomes (WHI-Sleep Study)

Presenter: Kathleen Hayden

Affiliation: Wake Forest University, Department of Social Sciences & Health Policy Division of Public Health Sciences

03/15/18

Title: Leukocytes & Exposure to Ambient Particulate Matter Air Pollution

Presenter: Rahul Gondalia

Affiliation: University of North Carolina, Department of Epidemiology

2017 Schedule

01/30/17

Title: GIS, Air Pollution Estimation Methods and Health Outcomes Hypothesis Testing in WHI

02/09/17

Title: Pooling Project of Prospective Studies of Diet and Cancer: Collaborative Opportunities for Environmental Research with the Women's Health Initiative

Presenters: Trang Minh VoPham & Stephanie Smith-Warner

Affiliation: Harvard University, T.H. Chan School of Public Health

04/13/17

Title: Adjusting Air Pollution-Stroke Models for Center & Region
Presenters: Greg Wellenius
Affiliation: Brown University, Department of Epidemiology

07/06/17

Title: Air Pollution, Nutrition & Brain Aging
Presenters: Ka He & Jiu-Chiuan Chen
Affiliation: Indiana University, School of Public Health & University of Southern California, Keck School of Medicine

07/20/17

Title: Effects of Short-term Particulate Air Pollution on Blood Pressure in Older Women
Presenter: Jeff Yanosky
Affiliation: Pennsylvania State University, Department of Public Health Sciences

08/03/17

Title: Long-term Exposure to Particulate Air Pollution and Incident Stroke
Presenter: Greg Wellenius
Affiliation: Brown University, Department of Epidemiology

12/14/17

Title: Gaseous Air Pollutants and DNA Methylation: A Methylome-wide Association Study of US Adults
Presenter: Katelyn Holliday
Affiliation: University of North Carolina, Department of Epidemiology

2016 Schedule

02/11/16

Title: Exposure to Traffic-Related Air Pollution and Risk of Lung Cancer in the Women's Health Initiative Observational Cohort Study
Presenter: Parveen Bhatti
Affiliation: Fred Hutchinson Cancer Research Center

05/03/16

Title: Long-term Exposure to PM_{2.5} and Presence and Onset of Depressive Symptoms in Post-Menopausal Women of the Women's Health Initiative (WHI)
Presenter: Yi Wang
Affiliation: Brown University, Department of Epidemiology

05/12/16

Title: Pharmacogenomic Risk Factors for Cardiac Arrhythmias in Global Populations
Presenter: Amanda Seyerle
Affiliation: University of North Carolina, Department of Epidemiology

06/16/16

Title: Effect modification of the association between individual and contextual level socioeconomic factors and stroke by race
Presenter: Monik Jiménez
Affiliation: Harvard Medical School, Brigham and Women's Hospital, Division of Women's Health

09/22/16

Title: Effects of short-term particulate air pollution on blood pressure in older women
Presenter: Jeff Yanosky
Affiliation: Pennsylvania State University, Department of Public Health Sciences

10/06/16

Title: Insulin, Insulin Resistance, and Exposure to Ambient Particulate Matter Air Pollution
Presenter: Archana Lamichhane
Affiliation: University of North Carolina, Department of Epidemiology

10/27/16

Title: Long-term Exposure to Residential Ambient Fine and Coarse Particulate Matter and Incident Hypertension in Post-Menopausal Women
Presenter: Trent Honda
Affiliation: Brown University, Department of Epidemiology

2015 Schedule

01/08/15

Title: Updates: 2015-2020 Extension, COSMOS. WHISH, Feasibility Funding RFA & Annual Investigator Meeting
Presenter: Eric Whitsel
Affiliation: University of North Carolina, Department of Epidemiology

03/12/15

Title: National Land Cover in WHI
Presenter: Eric Whitsel
Affiliation: University of North Carolina, Department of Epidemiology

06/11/15

Title: Integrating Rural-Urban Residence into the WHI: Applications to Cancer, Stroke, and Cardiovascular Disease
Presenter: Molly Roseland & Amy M. Lehman
Affiliations: Wayne State University, School of Medicine & Ohio State University, Center for Biostatistics

08/10/15

Title: Social Relationships, Inflammation, and Cancer Incidence
Presenter: Evan Busch
Affiliation: University of North Carolina, Department of Epidemiology

09/10/15

Title: Genetic Susceptibility to Particulate Matter-Associated QT Prolongation in a Trans-ethnic Genome-wide Association Study
Presenter: Rahul Gondalia
Affiliation: University of North Carolina, Department of Epidemiology

12/11/15

Title: Susceptibility to Effects of Air Pollution on Biomarkers of Diabetes Risk
Presenter: Archana Lamichhane
Affiliation: University of North Carolina, Department of Epidemiology

2014 Schedule

03/13/14

Title: A Trans-Ethnic, Genome-Wide Association Study of Ventricular & Supraventricular Ectopy
Presenter: Melanie Napier
Affiliation: University of North Carolina, Department of Epidemiology

05/02/14

Title: Novel Bio-indicators of Environmental Quality in the WHI: Emerald Ash Borer Infestation, Lichen Species Homogeneity and its Polycyclic Aromatic Hydrocarbon Content
Presenter: Geoffrey Donovan
Affiliation: United States Forest Service, Portland, OR

07/24/14

Title: Cardiovascular Disease and Noise Exposure in the WHI
Presenter: Junette Peters
Affiliation: Boston University, Department of Environmental Health

10/09/14

Title: Neighborhood Physical Environment in Relation to Mood, Sleep, and Quality of Life in WHI
Presenter: Anneclaire De Roos
Affiliation: Drexel University, Department of Environmental & Occupational Health

2013 Schedule

01/10/13

Title: Bibliographic Searching on WHI Website, WHI Core Genetic & Biomarker Data Updates
WHI Investigator's Meeting Updates
Presenter: Eric Whitsel
Affiliation: University of North Carolina, Departments of Epidemiology and Medicine

02/14/13

Title: A Pilot Study of Urinary Bisphenol A
Presenter: Juhua Luo & Katherine Reeves
Affiliation: University of Massachusetts Amherst, Division of Biostatistics & Epidemiology

04/11/13

Title: Ongoing Cadmium Studies in WHI
Presenter: Scott Adams
Affiliation: Fred Hutchinson Cancer Research Center, Public Health Sciences Division

09/12/13

Title: Data, Member and WHI Investigator Meeting Updates

10/18/13

Title: WHI Air

12/12/13

Title: Social Relationships, Inflammation and Cancer Incidence
Presenters: Evan Busch & Claire Yang
Affiliation: University of North Carolina, Departments of Epidemiology and Sociology, Carolina Population Center

2012 Schedule

01/12/12

Title: WHI SERC Request for Applications and WHI Broad Agency Announcement, Round III
Presenter: Eric Whitsel
Affiliation: University of North Carolina, Department of Epidemiology

03/08/12

Title: Investigation of Chronic Kidney Disease Outcomes in Post-Menopausal Women
Presenter: Nora Franceschini
Affiliation: University of North Carolina, Department of Epidemiology

04/12/12

Title: Long-term Exposures to Drinking Water Contaminants
Presenter: Ken Cantor
Affiliation: NIH, National Cancer Institute

06/14/12

Title: Emerald Ash Borer, Tree Canopy & Mortality
Presenter: Yvonne Michael & Geof Donovan
Affiliation: Drexel University and United States Forest Service, Portland, OR

07/12/12

Title: Medicare Linkage to WHI: Progress Since May 2011 & Validation of Acute Stroke in Medicare Data Against WHI
Presenter: Dale Burwen
Affiliation: NIH, NHLBI, Division of Cardiovascular Sciences, Prevention and Population Sciences Program, Women's Health Initiative Branch

09/13/12

Title: WHI Southeast Regional Center Annual Research Summit & WHI Extension Feasibility Study Funding Updates
Presenter: Eric Whitsel
Affiliation: University of North Carolina, Departments of Epidemiology and Medicine

10/11/12

Title: Participant Address Data and Traffic-related Air Pollution Exposure Estimation Update
Presenter: Eric Whitsel
Affiliation: University of North Carolina, Departments of Epidemiology and Medicine

12/06/12

Title: Pharmacogenomics of Risk Factors for Cardiac Arrhythmias in Global Populations
Presenter: Christy Avery
Affiliation: University of North Carolina, Department of Epidemiology

2011 Schedule

01/13/11

Title: Working with Identifiable Data, Bridging the OS & CT, and Geocoding
Presenter: Eric Whitsel
Affiliation: University of North Carolina, Department of Epidemiology

02/10/11

Title: New CMS and Biomarker Data Resources
Presenter: Eric Whitsel
Affiliation: University of North Carolina, Department of Epidemiology

04/14/11

Title: Continuity of Care for Patients with CVD and Related Risk Factors in the WHI
Presenter: Anna Kucharska-Newton
Affiliation: University of North Carolina, Department of Epidemiology

Title: The Environmental Context of Rural Cancer Survivorship
Presenter: Kate Weaver
Affiliation: Wake Forest University School of Medicine

05/12/11

Title: Contextual Susceptibility to Ambient Air Pollution Effects on Diabetes Risk
Presenter: Beth Ann Griffin & Regina Shih
Affiliation: RAND

Title: Environmental Determinants of Cognitive Aging
Presenter: Jiu-Chuan Chen
Affiliation: University of Southern California

07/14/11

Title: Use of Alternative Time Scales in CPH Models of Air Pollution Exposures

Presenter: Beth Ann Griffin

Affiliation: RAND

11/10/11

Title: Socioeconomic Disparities in Health: The Role of Diet Cost

Presenter: Colin Rehm

Affiliation: University of Washington, Department of Epidemiology

08/11/11

Title: Sources of Heterogeneity in the Correlation between Personal and Ambient Outdoor Concentrations of PM: Implications for Bias in Epidemiologic Studies

Presenter: Katie Holliday

Affiliation: University of North Carolina, Department of Epidemiology

12/08/11

Title: Socioeconomic Status, Long Term PM_{2.5} Exposure and Cardiovascular Disease

Presenter: Gloria Chi & Anjum Hajat

Affiliation: University of Washington, Department of Epidemiology

Title: PM_{2.5} Air Pollution and its Chemical Species, Exposure Measurement Error, and Incident CVD in the WHI-OS

Presenter: Kristin Miller

Affiliation: University of Washington, Department of Epidemiology

EPIDEMIOLOGY 141
Spring 2006
Instructors: Wayne Rosamond & Eric Whitsel
Bank of America Center, Suite 32 Conference Room
Reading List

EPID 141 (Advanced Cardiovascular Disease Epidemiology, Spring 2006). The goal of this course was to provide students with an opportunity for in-depth study of geographic information systems (GIS) in public health research, ambient particulate matter air pollution and coronary heart disease risk, and the emerging epidemic of heart failure (in lieu of EPID 737, which had been cancelled that year because of low enrollment). The readings and discussion-style course included four graduate students in our Cardiovascular Epidemiology Training Program who were preparing for their substantive qualifying examinations. I was an Assistant Professor in Epidemiology and Adjunct Assistant Professor in Medicine at the time of their enrollment. My role in this class was as Co-Director and Co-Instructor. Course content was therefore influenced by the substantive and methodological issues confronting researchers in my areas of interest and expertise. For additional details, see below.

Topic	Instructor	Discussant
Geographic Information Systems (GIS)		
Vine MF et al. Geographic information systems: their use in environmental epidemiologic research. <i>Environ Health Perspect.</i> 1997;105(6):598-605.	Eric Whitsel	Krystal Raymond
Krieger N, et al. On the wrong side of the tracts? Evaluating the accuracy of geocoding in public health research. <i>Am J Public Health.</i> 2001 Jul;91(7):1114-1116.	Eric Whitsel	Calpurnyia Roberts
Gregorio DI et al. Subject loss in spatial analysis of breast cancer. <i>Health Place.</i> 1999;5(2):173-177.	Eric Whitsel	Daniel Canos
Cayo MR et al. Positional error in automated geocoding of residential addresses. <i>Int J Health Geogr</i> 2003;2(1):10.	Eric Whitsel	Randi Foraker
Air Pollution & CHD		
Bell ML et al. Reassessment of the lethal London fog of 1952: novel indicators of acute and chronic consequences of acute exposure to air pollution. <i>Environ Health Perspect</i> 2001;109(S3):389-394.	Eric Whitsel	Randi Foraker
Brook RD et al. Air pollution and cardiovascular disease: a statement for healthcare professionals from the Expert Panel on Population and Prevention Science of the American Heart Association. <i>Circulation.</i> 2004;109(21):2655-2671.	Eric Whitsel	Daniel Canos
Dockery DW, et al. An association between air pollution and mortality in six U.S. cities. <i>N Engl J Med</i> 1993;329(24):1753-1759.	Eric Whitsel	Wayne Rosamond
Samet JM, et al. Fine particulate air pollution and mortality in 20 U.S. cities, 1987-1994. <i>N Engl J Med</i> 2000;343(24):1742-1749.	Eric Whitsel	Daniel Canos
Pope CA 3rd et al. Cardiovascular mortality and long-term exposure to particulate air pollution: epidemiological evidence of general pathophysiological pathways of disease. <i>Circulation.</i> 2004;109(1):71-77.	Eric Whitsel	Calpurnyia Roberts
Heart Failure		
Jessup M, Brozena S. Heart failure. <i>N Engl J Med</i> 2003;348:2007-18.	Eric Whitsel	Calpurnyia Roberts

Lloyd-Jones DM, Larson MG, Leip MG, et al. Lifetime risk for developing congestive heart failure: The Framingham Heart Study. <i>Circulation</i> 2002;106:3068-72.	Wayne Rosamond	Daniel Canos
Kenchaiah S, et al. Obesity and risk of heart failure. <i>NEJM</i> 2002;347:305-312.	Wayne Rosamond	Kari North
Di Bari M, et al The diagnosis of heart failure in the community: comparative validation of four sets of criteria in unselected older adults. <i>J Am Coll Cardiol</i> 2004;44:1601-1608.	Wayne Rosamond	Calpurnia Roberts
Roger V, Weston S, Redfield M. Trends in heart failure incidence and survival in a community-based population. <i>JAMA</i> 2004;292:344-350.	Wayne Rosamond	Randi Foraker
Goldberg R, et al. Incidence and hospital death rates associated with heart failure: A community-wide perspective. <i>Am J Med</i> 2005;118:728-734.	Wayne Rosamond	Krystal Raymond

EPIDEMIOLOGY 225
Clinical Trials, Spring 2003
Meta-Analysis Laboratory Modules
Instructor: Eric A. Whitsel

EPID 225 (Clinical Trials, Spring 2003). The goal of this course was to introduce students to clinical trials from an epidemiological and biostatistical perspective. The course included approximately thirty students from the UNC-Chapel Hill Schools of Public Health, Medicine and Pharmacy; Duke University School of Medicine; and NC State University College of Veterinary Medicine. I was a Clinical Instructor in Medicine at the time of their enrollment. My role in this class was to teach students methods for conducting meta-analysis of clinical trials, including how to frame a well-built clinical question, establish exclusion criteria, conduct a sensitive and specific search of the literature, finalize a reference database, apply exclusion criteria, extract data, create a dataset, estimate study-specific measures of association, test homogeneity of study-specific measures, estimate summary measures assuming fixed / random effects, graph results, and examine the importance of publication bias. To this end, I developed six meta-analysis laboratory modules. The students attended these modules to prepare their term projects and presentations on which their course grades were based. For additional details, please see below.

Schedule

Wednesday February 5, 2003 3:00-4:30	Meta-Analysis Module I: Getting Started
Wednesday February 12, 2003 3:00-4:30	Meta-Analysis Module II: What's Next?
Wednesday February 26, 2003 4:30-6:00	Meta-Analysis Module III: Analysis
Wednesday March 19, 2003 4:30-6:00	Meta-Analysis Module IV: Analysis Continued
Wednesday March 26, 2003 4:30-6:00	Meta-Analysis Module V: Summary & Questions
Tuesday April 1, 2003 9:30-11:00	Meta-Analysis Module VI: Questions & Answers

References & Readings

Meta-Analysis Module I: Getting Started

Search OVID: www.hsl.unc.edu.

Download STATA: www.unc.edu/~ewhitsel/stata.

Download meta-analysis modules: www.stata.com.

EPID 225 website @ www.blackboard.unc.edu.

Oxman AD, et al. User's guides to the medical literature. I. How to get started. *JAMA* 1993;270(17):2093-2095.

Ebbert Jo, et al. Searching the medical literature using PubMed: A tutorial. *Mayo Clin Proc* 2003;78:87-91.

Greenland S. Meta-analysis. In: Rothman KJ, Greenland S (eds), *Modern Epidemiology*, 2nd edition. Lippincott, Philadelphia, 1998:643-673.

Meta-Analysis Module II: What's Next?

Cooper H, Hedges LV (eds), *The handbook of research synthesis*. Russell Sage Foundation, New York, 1994.

Grégoire G, et al. Selecting the language of the publications included in a meta-analysis: Is there a Tower of Babel bias? *J Clin Epidemiol* 1995;48:159-163.

Meta-Analysis Module III: Analysis

Shadish WR, Haddock CK. Combining estimates of effect size. In: Cooper H, Hedges LV (eds), *The handbook of research synthesis*. Russell Sage Foundation, New York, 1994.

Pearson K. Report on certain enteric fever inoculation statistics. *BMJ* 1904:1243-1246.

Sharp S, Sterne J. Meta-analysis. *Stata Tech Bull* 1997;38(16):9-14.

Sharp S, Sterne J. Corrections to the meta-analysis command. *Stata Tech Bull* 1998;43(16.2):15.

Meta-Analysis Module IV: Analysis Continued

Wang MC, Bushman BJ. Integrating results through meta-analytic review using SAS® software. SAS Institute Inc., Cary, NC, 1999.

Stokes ME, Davis CS, Koch GG. Sets of 2 x 2 tables. In: *Categorical data analysis using the SAS® system*, 2nd edition. SAS Institute Inc., Cary, NC, 2000.

James MP et al. A Monte Carlo investigation of homogeneity tests of the odds ratio under various sample size configurations. *Biometrics* 1989;45:171-181

Fleiss JL. *Statistical methods for rates and proportions*, 2nd edition. Wiley, New York, 1981.

Steichen TJ. Tests for publication bias in meta-analysis. *Stata Tech Bull* 1998;41(19):9-15.

Begg CB, Mazumdar M. Operating characteristics of a rank correlation test for publication bias. *Biometrics* 1994;50:1088-1101.
Egger M, et al. Bias in meta-analysis detected by a simple graphical test. *BMJ* 1997;315:629-634.

Meta-Analysis Module V: Summary & Questions

Rothman KJ. Analysis of crude data. In: *Modern Epidemiology*. Little, Brown & Co., Boston, MA, 1986:153-176.
Lauritsen JM. How to edit a graph in Microsoft Word, 2001.
<http://www.stata.com/support/faqs/win/editgraph.html>.
Whitsel et al. Intramuscular testosterone esters and plasma lipids in hypogonadal men: A meta-analysis. *Am J Med* 2001;111:261-269.