

BIOGRAPHICAL SKETCH

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NAME: Ehrenthal, Deborah Beth

eRA COMMONS USER NAME (credential, e.g., agency login): DEHRENTHAL

POSITION TITLE: Associate Professor (with tenure)

EDUCATION/TRAINING (*Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable.*)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
Wesleyan University, Middletown, CT	BA	06/1980	Chemistry
University of Massachusetts, Worcester, MA	MD	06/1986	Medicine
Johns Hopkins Bloomberg School of Public, Baltimore, MD	MPH	12/2011	Public Health
Yale New Haven Hospital, New Haven, CT	Resident	06/1989	Internal Medicine

A. Personal Statement

In 2014 I was recruited to UW-Madison to serve as the Lifecourse Initiative for Healthy Families (LIHF) Chair to build maternal and child health training and research at the University, and to serve as the Faculty Director for LIHF, a statewide initiative designed to reduce racial disparities in birth outcomes. My recruitment reflects the high level support at the School of Medicine and Public Health for the continued expansion of maternal and child health, and health disparities research, at the University.

My research focuses on three intersecting areas of women's health and maternal and child health where health disparities are of fundamental importance: perinatal health and health care, women's cardiovascular disease, and child health. Much of my work explores the associations of women's health and health care with perinatal outcomes of mothers and infants, guided by clinical and policy questions on the national agenda. My 22 years working at a large academic community hospital have given me "in-the-trenches" experience designing and implementing programs targeting high-risk women in the clinical office practice and inpatient services. In addition, I have developed methods to use data from electronic medical records, linked to other data sources, to study health care delivery and health disparities.

At UW-Madison I play a number of mentoring roles in the School of Medicine and Public Health. I am the Principal Investigator of the Health Disparities Research Scholar Program, supported by an institutional (T32) training grant from the Eunice Kennedy Shriver National Institute of Child Health & Human Development and provides training at the postdoctoral level in interdisciplinary research that addresses disparities in health status and health outcomes among minority populations with an emphasis on maternal/child, adolescent and family health. In addition, I serve on the Executive Committee of the NIH-funded Building interdisciplinary Research Careers in Women's Health (BIRCWH), an institutional NIH K12 award which trains junior faculty to conduct research in women's health. I am a formal and informal mentor to individual scholars from both the Health Disparities Research Scholars Program and the BIRCWH. I am also academic advisor, and dissertation committee member, to graduate students in the Department of Population Health Sciences. This community of multidisciplinary scholars helps to create an outstanding learning environment for predoctoral students interested in health disparities.

1. Ehrenthal DB, Wu P, Trabulsi J. Differences in the Protective Effect of Exclusive Breastfeeding on Child Overweight and Obesity by Mother's Race. *Matern Child Health J.* 2016 Sep;20(9):1971-9. PubMed PMID: [27178429](#).
2. Männistö T, Mendola P, Kiely M, O'Loughlin J, Werder E, Chen Z, Ehrenthal DB, Grantz KL. Maternal psychiatric disorders and risk of preterm birth. *Ann Epidemiol.* 2016 Jan;26(1):14-20. PubMed PMID: [26586549](#); PubMed Central PMCID: [PMC4688227](#).

3. Feinberg ME, Jones DE, Roettger ME, Hostetler ML, Sakuma KL, Paul IM, Ehrenthal DB. Preventive Effects on Birth Outcomes: Buffering Impact of Maternal Stress, Depression, and Anxiety. *Matern Child Health J.* 2016 Jan;20(1):56-65. PubMed PMID: [26194453](#).
4. Ehrenthal DB, Jurkowitz C, Hoffman M, Kroelinger C, Weintraub W. A population study of the contribution of medical comorbidity to the risk of prematurity in blacks. *Am J Obstet Gynecol.* 2007 Oct;197(4):409.e1-6. PubMed PMID: [17904981](#).

B. Positions and Honors

Positions and Employment

1991 - 1992	Clinical Associate, Hospital of the University of Pennsylvania, Philadelphia, PA
1992 - 2014	Teaching Faculty, Christiana Care Health System, Newark, DE
1995 - 2011	Clinical Assistant Professor in Medicine, Thomas Jefferson Medical College, Philadelphia, PA
2012 - 2014	Associate Professor, Thomas Jefferson Medical College, Philadelphia, PA
2012 - 2014	Director of Health Services Research for Women and Children, Christiana Care Health System, Newark, DE
2014 - 2016	Associate Professor (CHS), University of Wisconsin-Madison, Madison, WI
2016 -	Associate Professor (with tenure), University of Wisconsin-Madison, Madison, WI

Other Experience and Professional Memberships

- Member, Society for General Internal Medicine
- Fellow, American College of Physicians
- Member, American Public Health Association

Honors

2012	MPH Capstone Award for Outstanding Achievement, Johns Hopkins Bloomberg School of Public Health
2012	Delta Omega Society, Alpha Chapter, Johns Hopkins Bloomberg School of Public Health
2013	Rising Star Award, Christiana Care Health System
2013	Distinguished Researcher Award, Christiana Care Health System
2014	Health Equity Award, Delaware Healthy Mother and Infant Consortium
2016	Lifecourse Initiative for Healthy Families Chair, University of Wisconsin-Madison

C. Contribution to Science

1. Perinatal health and health care. My research integrates women's health with maternal and child health. It has influenced policy on a national level and stimulated new research in the field of Obstetrics and Gynecology and Maternal and Child Health. My study on labor induction, highlighted in an accompanying editorial, is now cited as evidence to support a new national quality measure through the National Quality Forum and The Joint Commission. My work on outcomes related to guidelines limiting early elective delivery remains one of the few examinations of meaningful outcomes related to this national initiative and a new quality measure from The Joint Commission.
 - a. Ehrenthal DB, Jiang X, Strobino DM. Labor induction and the risk of a cesarean delivery among nulliparous women at term. *Obstet Gynecol.* 2010 Jul;116(1):35-42. PubMed PMID: [20567165](#).
 - b. Ehrenthal DB, Jurkowitz C, Hoffman M, Jiang X, Weintraub WS. Prepregnancy body mass index as an independent risk factor for pregnancy-induced hypertension. *J Womens Health (Larchmt).* 2011 Jan;20(1):67-72. PubMed PMID: [21194273](#).
 - c. Ehrenthal DB, Hoffman MK, Jiang X, Ostrum G. Neonatal outcomes after implementation of guidelines limiting elective delivery before 39 weeks of gestation. *Obstet Gynecol.* 2011 Nov;118(5):1047-55. PubMed PMID: [22015872](#).
 - d. Ehrenthal DB, Chichester ML, Cole OS, Jiang X. Maternal risk factors for peripartum transfusion. *J Womens Health (Larchmt).* 2012 Jul;21(7):792-7. PubMed PMID: [22500552](#).

2. Maternal determinants of child health. I have used linked data sources to investigate maternal determinants of children's health outcomes. Mothers transmit risk and resilience to their children through their genes, the intrauterine environment, and the social and behavioral context in which they live. However, there are few cohorts of mothers and their offspring in the U.S. designed to understand the transmission of obesity risk. By linking electronic medical record data for mothers to their offspring and to birth records and Geographic Information Sources, I constructed a diverse prospective cohort of nearly 5,000 mother-baby pairs. This work is ongoing; the impact will continue to grow as we use the data to study obesity risk and identify strategic windows for intervention. In addition, I collaborate with Feinberg to study the impact of his Family Foundations intervention on outcomes for mothers and children.
 - a. Feinberg ME, Jones DE, Roettger ME, Hostetler ML, Sakuma KL, Paul IM, Ehrental DB. Preventive Effects on Birth Outcomes: Buffering Impact of Maternal Stress, Depression, and Anxiety. *Matern Child Health J.* 2016 Jan;20(1):56-65. PubMed PMID: [26194453](#).
 - b. Ehrental DB, Strobino D, Minkovitz C. Obesity during Pregnancy in Clinical Practice. Nicholson W, Baptiste-Roberts K, editors. New York: Springer; 2014. Chapter 10, Maternal Obesity, Gestational Weight Gain and Early Childhood Growth
 - c. Ehrental DB, Maiden K, Rao A, West DW, Gidding SS, Bartoshesky L, Carterette B, Ross J, Strobino D. Independent relation of maternal prenatal factors to early childhood obesity in the offspring. *Obstet Gynecol.* 2013 Jan;121(1):115-21. PubMed PMID: [23262935](#).
 - d. Ehrental DB, Hoffman MK, Jiang X, Ostrum G. Neonatal outcomes after implementation of guidelines limiting elective delivery before 39 weeks of gestation. *Obstet Gynecol.* 2011 Nov;118(5):1047-55. PubMed PMID: [22015872](#).
3. Research using data from electronic medical records. My work has demonstrated that these sources can be used to understand the health of large populations and investigate health disparities and the social determinants of health. Much of my work has focused on perinatal outcomes, where most investigators use data collected from observational cohorts or are secondary analyses of administrative records. However, medical record data reach populations with greater diversity than many cohort studies, and more accurately capture women's morbidities and clinical outcomes than administrative sources. My research has made important contributions to our understanding of the drivers of clinical outcomes, such as the examination of the risk factors for adverse pregnancy outcomes.
 - a. Rao A, Maiden K, Carterette B, Ehrental DB. Predicting Baby Feeding Method from Unstructured Electronic Health Record Data. DTMBIO'12: ACM Sixth International Workshop on Data and Text Mining in Biomedical conference proceedings 2012 October.
 - b. Hoffman MK, Merriam AA, Ehrental DB. Fetal outcomes of elective delivery. *Clin Obstet Gynecol.* 2014 Jun;57(2):401-14. PubMed PMID: [24709710](#).
 - c. Bhattacharya M, Ehrental D, Shatkay H. Identifying growth-patterns in children by applying cluster analysis to electronic medical records. Belfast, Ireland: Proceedings of the IEEE International Conference on Bioinformatics and Bioedicine (BIBM); 2014 November.
 - d. Min CJ, Ehrental DB, Strobino DM. Investigating racial differences in risk factors for primary cesarean delivery. *Am J Obstet Gynecol.* 2015 Jun;212(6):814.e1-814.e14. PubMed PMID: [25637848](#).
4. Cardiovascular disease in women. My unique contribution to this field is a focus on the health and health care of women during their reproductive years. I have embarked on several lines of research in this area, ranging from studies of health care delivery to investigations designed to clarify mechanistic pathways. Strategies to increase early identification of women at high-risk for cardiovascular disease during their reproductive years are needed and could be built on an enhanced role of the Obstetrician Gynecologist. In addition, an understanding of the link between adverse pregnancy outcomes and cardiovascular risk is necessary to guide the development of effective strategies for primary prevention. I served on a national panel to develop educational materials to disseminate evidence-based cardiovascular disease prevention guidelines for to providers. Also in recognition of my expertise, I was invited to contribute an article for *Seminars in Perinatology*. Last year, I was invited to co-chair the Cardiovascular Subcommittee of the nuMoM2b Heart Health Study, a large multicenter NHBLI study to examine the link between adverse pregnancy outcomes and future cardiovascular disease.

- a. Ehrenthal DB, Haynes SG, Martin KE, Hitch JA, Addo SF, O'Neill E, Piña IL, Taubenheim AM, Sloan NL. Evaluation of the Heart Truth professional education campaign on provider knowledge of women and heart disease. *Womens Health Issues*. 2013 Mar-Apr;23(2):e87-93. PubMed PMID: [23481694](https://pubmed.ncbi.nlm.nih.gov/23481694/).
- b. Ehrenthal DB, Catov JM. Importance of engaging obstetrician/gynecologists in cardiovascular disease prevention. *Curr Opin Cardiol*. 2013 Sep;28(5):547-53. PubMed PMID: [23928919](https://pubmed.ncbi.nlm.nih.gov/23928919/); PubMed Central PMCID: [PMC4019599](https://pubmed.ncbi.nlm.nih.gov/pmc/articles/PMC4019599/).
- c. Ehrenthal DB, Goldstein ND, Wu P, Rogers S, Townsend RR, Edwards DG. Arterial stiffness and wave reflection 1 year after a pregnancy complicated by hypertension. *J Clin Hypertens (Greenwich)*. 2014 Oct;16(10):695-9. PubMed PMID: [25116457](https://pubmed.ncbi.nlm.nih.gov/25116457/); PubMed Central PMCID: [PMC4192066](https://pubmed.ncbi.nlm.nih.gov/pmc/articles/PMC4192066/).
- d. Ehrenthal DB, Rogers S, Goldstein ND, Edwards DG, Weintraub WS. Cardiovascular risk factors one year after a hypertensive disorder of pregnancy. *J Womens Health (Larchmt)*. 2015 Jan;24(1):23-9. PubMed PMID: [25247261](https://pubmed.ncbi.nlm.nih.gov/25247261/); PubMed Central PMCID: [PMC4302950](https://pubmed.ncbi.nlm.nih.gov/pmc/articles/PMC4302950/).

Complete List of Published Work in My Bibliography: <http://bit.ly/1jB42MT>

D. Additional Information: Research Support and/or Scholastic Performance

Ongoing Research Support

T32 HD049302-09 Ehrenthal, Deborah Beth (PI) 05/01/05-04/30/17
 Health Disparities Research Scholars T32
 Role: PI

N/A, Wisconsin Partnership Program Ehrenthal, Deborah Beth (PI) 06/01/16-05/31/19
 Big Data for Little Kids: The Impact of Prenatal Interventions on Birth Outcomes and School Readiness
 This study is a collaboration with Lonnie Berger (co-I) of the Institute for Research on Poverty, and Eric Grodsky (co-I) of the Center for Demography and Ecology and the Wisconsin Center for Education Research, the proposed research will determine if the three promising strategies currently implemented in Wisconsin are leading to reductions in low birth weight and prematurity, and further seeks evidence of a durable impact on children.
 Role: PI

N/A, Wisconsin Partnership Program Ehrenthal, Deborah Beth (PI) 01/01/15-03/31/19
 Lifecourse Initiative for Healthy Families Evaluation
 The main goals of the evaluation are to provide information and feedback to guide Lifecourse Initiative for Healthy Families (LIHF) and to demonstrate overall impact. The evaluation will be both formative and summative, using qualitative and quantitative methods.
 Role: PI

n/a, Wisconsin Partnership Program Ehrenthal, Deborah Beth (PI) 07/01/15-03/31/19
 LIHF Pregnancy Risk Assessment and Monitoring System
 This grant supports the CDC Pregnancy Risk Assessment and Monitoring System PRAMS to collect an oversample of African American mothers in Wisconsin to provide data to support the evaluation of the Lifecourse Initiative for Healthy Families.
 Role: PI

3143, Wisconsin Partnership Program Ehrenthal, Deborah Beth (PI) 01/01/16-12/01/18
 Big Data for Little Kids: The Impact of Prenatal Interventions on Birth Outcomes and School Readiness
 The proposed research will determine if the three promising health care strategies currently implemented in Wisconsin are leading to reductions in low birth weight and prematurity, and further seeks evidence of a durable impact on children.

Role: PI

n/a, UW Institute for Clinical and Translational Research Ehrental, Deborah Beth (PI) 10/01/15-09/30/16
Big Data For Little Kids: Establishing Population Effectiveness Of Maternal And Child Health Programs
The primary objective of this funding is to develop a pilot project that will draw on extant data from multiple sources to create a data system with sufficient information about mothers and children to examine reach and estimate the variable causal impact of this early intervention program.

Role: PI

N/A, Institute for Research on Poverty Ehrental, Deborah Beth (PI) 09/01/15-08/31/16
Big Data for Little Kids

The primary objective of this funding is to provide graduate assistant support to develop a pilot project that will draw on extant data from multiple sources to create a data system with sufficient information about mothers and children to examine reach and estimate the variable causal impact of this early intervention program.

Role: CPI

U10 HL120034 , NIH Parker (PI) 01/01/13-06/30/18
Pregnancy as a Window to Future Cardiovascular Health

This is a follow-up of the multisite, 10,000 subject NuMom2b study. This observational cohort study will examine cardiovascular risk 2-3 years after pregnancy.

Role: CSU

Completed Research Support

R01 HD058529 , NIH Feinberg (PI) 06/12/08-03/31/15
Trial of Transition to Parenting Program for Couples

This is a randomized trial of a universal preventive intervention delivered to couples at the transition to parenthood, aimed at enhancing co-parental support and problem solving, decreasing inter-parental conflict and parental depression, and strengthening warm, engaged parenting among first-time parents.

Role: Co-Investigator

U54 GM104941, NIH Binder-Macleod (PI) 09/25/13-06/30/14
Center for Translational Research

The DE-CTR is a regional partnership comprised of four partner institutions, located in two states - Delaware and South Carolina: The University of Delaware, Christiana Care Health System, Nemours/Alfred I. DuPont Hospital for Children, and the Medical University of South Carolina.

Role: Co-Investigator

U10 HL120034 , NIH Wapner (PI) 08/24/13-06/30/14
Pregnancy as a Window to Future Cardiovascular Health

This is a follow-up of the multisite, 10,000 subject NuMom2b study. This observational cohort study will examine cardiovascular risk 2-3 years after pregnancy.

Role: Co-Investigator

P20 GM103446-13, NIH Steiner (PI) 03/01/12-02/27/14

INBRE Pilot Grant: Cardiovascular risk one year following a pregnancy complicated by hypertension

The objective of this application is to explore the metabolic, inflammatory, vascular, and stress characteristics of women one year after a pregnancy complicated by hypertension, and compare them to women after a healthy pregnancy.

Role: PI

N/A, Delaware Health Sciences Alliance Ehrental, Deborah Beth (PI) 11/01/10-02/27/12

Novel approaches to the study of determinants of childhood obesity utilizing health information systems
The purpose of the study was to demonstrate the ability to create a longitudinal cohort of mother-baby dyads using clinical data ascertained from the mother at the birth hospital before or during pregnancy and from the pediatrician office for offspring followed from birth to age three. This data will then be used to measure the association between maternal factors and early childhood obesity.

Role: PI

HHS P23320082207TC, Federal OWH Ehrental, Deborah Beth (PI) 09/01/08-01/01/12

Delaware Primary Care Partnership in Women's Health

The purpose of this project is to disseminate evidence-based guidelines using the Heart Truth Campaign to primary care providers across the state of Delaware to improve cardiovascular screening and outcomes for women.

Role: PI