

BIOGRAPHICAL SKETCH

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NAME: Dodge, Laura Elizabeth

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

POSITION TITLE: Staff Scientist

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

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
McGill University	BSc	06/2006	Biology
Boston University School of Public Health (BUSPH)	MPH	01/2010	Maternal and Child Health
Harvard T.H. Chan School of Public Health (HSPH)	ScD	11/2014	Epidemiology

A. Personal Statement

As a full-time reproductive epidemiologist in the Department of Obstetrics and Gynecology at Beth Israel Deaconess Medical Center (BIDMC), I pursue collaborative research related to the full range of obstetrics and gynecology services. I also collaborate with other clinical departments throughout BIDMC and the Longwood Medical Area. In my own work, I focus primarily on infertility research and family planning. My work on infertility focuses largely on factors related to success of in vitro fertilization, with frequent use of cumulative incidence of live birth as an analysis technique. My work on family planning focuses largely on domestic reproductive rights and access to abortion.

B. Positions and Honors**Positions and Employment**

2006–07 Laboratory Technician, Meakins–Christie Labs, McGill University, Montreal, QC, Canada
 2008 Intern, Ibis Reproductive Health, Cambridge, MA
 2008–14 Clinical Research Assistant, Department of Obstetrics and Gynecology, BIDMC, Boston, MA
 2014– Staff Scientist, Department of Obstetrics and Gynecology, BIDMC, Boston, MA
 2014–2018 Instructor, Department of Obstetrics, Gynecology and Reproductive Biology, HMS, Boston, MA
 2017– Instructor, Department of Epidemiology, HSPH, Boston, MA
 2018– Assistant Professor, Department of Obstetrics, Gynecology and Reproductive Biology, HMS, Boston, MA
 2018– Consultant, Harvard Catalyst Biostatistics Consultation Program
 2020– Adjunct Faculty, Simmons University, Boston, MA

Other Experience and Professional Memberships

2008–2009 Member, American Public Health Association
 2011– Member, Society of Epidemiologic Research
 2012– Member, Society of Perinatal and Pediatric Epidemiologic Research
 2014– Fellow, Society of Family Planning
 2015– Member, American Society for Reproductive Medicine
 2015– Officer, BIDMC Scientific Review Committee
 2016– Member, Committee on Clinical Investigations/Institutional Review Board
 2018– Grant Reviewer, Office of Population Affairs Family Planning Services Grants

2019– Grant Reviewer, Office of Population Affairs Family Planning Research Grants
2020– Grant Reviewer, Society of Family Planning Research Fund

Honors

2007–08 Research Fellowship, Department of Maternal and Child Health, BUSPH
2007–08 Merit Scholarship, BUSPH
2008 Award for Excellence in Public Health Practice, Honorable Mention, BUSPH
2010, 2012 Jacob, Beulah, and Donald Chayet Scholarship
2011–14 National Institutes of Health Epidemiology Training Grant, HSPH
2012 Summer Institute in Reproductive and Perinatal Epidemiology, National Institute of Child Health and Human Development
2016 Outstanding Reviewer, Women's Health Issues

C. Contributions to Science

1. A large portion of my work deals with understanding how to optimize counseling and treatment success for women and couples undergoing IVF, which is important due to the high cost and invasive nature of the procedures. This work has documented the cumulative probability of multiple births following IVF, as well as the cumulative probability of live births following IVF among subgroups of young women (<35 years of age), who are traditionally treated as one group. These findings are used clinically to improve patient counseling. Additional work has investigated the effect of alcohol consumption on treatment success following IVF, which is useful in terms of counseling patients on lifestyle factors. This work provides evidence of successful collaborations with two key collaborators from the proposed study (Drs. Hacker and Penzias). Findings from the proposed study would allow me to build on this prior work by examining factors associated with IVF treatment success and expanding the literature surrounding patient counseling for IVF.
 - a. Malizia BA, **Dodge LE**, Penzias AS, Hacker MR. The cumulative probability of liveborn multiples after in vitro fertilization: a cohort study of over 10,000 women. *Fertility and Sterility*, 2013;99:393-9.
 - b. Humm K†, **Dodge LE**†, Wu LH, Penzias AS, Malizia BA, Sakkas D, Hacker MR. In vitro fertilization in women under 35: counseling should differ by age. *Journal of Assisted Reproduction and Genetics*, 2015;32:1449-57.
 - c. **Dodge LE**, Missmer SA, Thornton KL, Hacker MR. Women's alcohol consumption and cumulative incidence of live birth following in vitro fertilization. *Journal of Assisted Reproduction and Genetics*, 2017;34(7):877-83.
†Denotes both authors contributed equally to this work.
2. Another area of my work focuses on identifying the reasons why women discontinue IVF treatment prior to achieving a live birth, which allows us to better understand patients' motivations and barriers surrounding IVF treatment and to ultimately improve the patient experience. My published work has examined reasons for treatment discontinuation among individuals with insurance coverage for IVF treatment and has also investigated whether these reasons differ by patient age. Ongoing work in this area consists of examining discontinuation among individuals who complete a single unsuccessful IVF cycle and among those who use preimplantation genetic testing for aneuploidy. This work provides evidence of successful collaborations with two key collaborators from the proposed study (Drs. Domar and Hacker). Findings from the proposed study would allow me to build on this prior work with Dr. Domar, who is an expert in the field of psychosocial issues surrounding fertility treatment, by providing more detailed knowledge about individuals who discontinue unsuccessful IVF treatment and enabling long-term follow-up of these individuals to determine the ultimate outcomes of their infertility.
 - a. **Dodge LE**, Sakkas D, Hacker MR, Feuerstein R, Domar AD. The impact of younger age on treatment discontinuation in insured IVF patients. *Journal of Assisted Reproduction and Genetics*, 2016 Nov 26.
 - b. Domar AD, Rooney K, Rich C, Hacker MR, Sakkas D, **Dodge LE**. Burden of care is the primary reason why insured women terminate IVF treatment. *Fertility and Sterility*, 2018;109(6):1121-6.
3. Endocrine-disrupting chemicals, specifically phenols and phthalates, have attracted the interest of scientists, the public, and governmental agencies due to concerns regarding potential adverse reproductive

effects of exposure. This work shows for the first time that paraben-containing medications can contribute to high urinary paraben concentrations within hours of use. By identifying this novel source of paraben exposure, this work will inform future investigations with regards to more complete exposure assessments. It also provides some of the first evidence that paternal phenol and phthalate exposure may affect couple-level early reproductive outcomes. Additionally, by studying intermediate endpoints of reproduction, these findings increase our understanding of the outcomes that may be affected by environmental chemicals and support the need for caution surrounding the use of endocrine disrupting chemicals in consumer products.

- a. **Dodge LE**, Kelley KE, Williams PL, Williams MA, Hernandez-Diaz S, Missmer SA, Hauser R. Medications as a source of paraben exposure in women and men of reproductive age. *Reproductive Toxicology*, 2015;52:93-100.
- b. **Dodge LE**, Williams PL, Williams MA, Missmer SA, Toth TL, Calafat AM, Hauser R. Paternal urinary concentrations of parabens and other phenols in relation to reproductive outcomes among couples from a fertility clinic. *Environmental Health Perspectives*, 2015;123(7):665-71.
- c. **Dodge LE**, Williams PL, Williams MA, Missmer SA, Souter I, Calafat AM, Hauser R. Associations between paternal urinary phthalate concentrations and reproductive outcomes among couples seeking fertility treatment. *Reproductive Toxicology*, 2015;58:184-93.

Complete List of Published Work in MyBibliography:

https://www.ncbi.nlm.nih.gov/sites/myncbi/1LaNcuZ_6rmQ8/bibliography/49553300/public/?sort=date&direction=ascending

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

Ongoing Research Support

NIH 1 UL 1 TR 001102-01 Pascual-Leon (PI) 10/01/2018-12/31/2020

Harvard Catalyst | The Harvard Clinical and Translational Science Center

The goals of this program are to provide resources to educate and develop the next generation of researchers trained in the complexities of translating research discoveries into clinical trials ultimately into practice. Design new and improved clinical research informatics tools for analyzing research data and managing clinical trials. Support outreach to underserved populations, local community and advocacy organizations, and health care providers. Assemble interdisciplinary teams and forge new partnerships with private and public health care organizations.

Role: Biostatistician

Society of Family Planning Grant Dodge (PI) 10/15/2018-10/14/2020

Quality of information available online for medication abortion self-referral

The goal of this work is to, in collaboration with computer engineers, develop and use automated search tools using crowdsourced terms in English and Spanish to mimic searches from each of the nearly 42,000 US zip codes in order to describe the quality of information available for medication abortion self-referral. We will leverage our existing relationship with Google to determine whether this information can effectively assist Google in improving the search product related to medication abortion.

Role: PI

NIH Contraception and Infertility Research Loan Repayment Program 09/01/2019-08/31/2020

Examining male partner characteristics and use of preimplantation genetic testing to improve patient counseling and clinical outcomes for patients undergoing in vitro fertilization

The goal of this work is to examine characteristics of the male partner among couples who are undergoing in vitro fertilization in order to generate new information to improvement patient counseling and treatment success following in vitro fertilization.

Role: PI

Completed Research Support

T32 ES 07069	Dockery (PI)	09/01/2011-08/31/2014
National Institute of Environmental Health Sciences Training Grant The goal of this program is to provide training to pre-doctoral students in environmental health. Role: Pre-doctoral trainee		
NIH Contraception and Infertility Research Loan Repayment Program		09/01/2016-08/31/2017
Improving the infertility knowledge base using appropriate statistical methods to investigate the etiology of meaningful clinical questions The goal of this project was to use a large clinical dataset to investigate novel clinical questions using appropriate statistical methods. Role: PI		
Ibis Reproductive Health	Blanchard (PI)	01/01/2017-12/31/2017
Later Abortion Initiative The goal of this project was to conduct research and create resources regarding the issue of later abortion in the United States. Role: Consultant		
NIH Contraception and Infertility Research Loan Repayment Program		09/01/2017-08/31/2019
Novel clinical questions to improve counseling and outcomes for patients undergoing in vitro fertilization The goal of this work is to challenge existing beliefs that lack a strong evidence base, as well as to generate new information to improve patient counseling and treatment success following in vitro fertilization. Role: PI		
William F. Milton Fund, Harvard University	Dodge (PI)	10/02/2017-09/31/2018
Using a large and complete cohort to investigate racial and ethnic disparities in treatment success following in vitro fertilization The goal of this project is to investigate differences in treatment success following in vitro fertilization according to patient race and ethnicity. Role: PI		
TeamSTEPPS Research Project-NCE	Paul (PI)	01/01/2018-12/31/2019
Evaluation of Affiliates Risk Management Services, Inc.'s TeamSTEPPS training intervention The major goal of this study is to evaluate the influence of team training on team knowledge, skills and attitudes, as well as quality and safety measures at Planned Parenthood affiliates throughout the United States. Role: Key Personnel		
Grant, Ibis Reproductive Health	Dodge (PI)	01/01/2018-5/31/2019
An investigation of referral patterns for abortion care within an academic medical network The goal of this project is to conduct a case study of abortion referrals within an academic medical network that has dedicated family planning services in order to investigate best practices in referral-making. Role: PI		
TeamSTEPPS collaboration with IPAS Paul (PI)		4/05/2018-12/31/2019
Evaluating the TeamSTEPPS approach for improving abortion care services in Bolivia and Ethiopia The goal of this work is to teach and integrate team training approaches using the TeamSTEPPS curriculum into healthcare facilities in Bolivia and Ethiopia. We will build on our prior experience instituting TeamSTEPPS training at a national network of ambulatory reproductive healthcare facilities in the United States. Role: Key Personnel		