

## MARISA E. MILLENSON, ScM

*Trainee, University of Pittsburgh / Carnegie Mellon University Medical Scientist Training Program (MSTP)*

University of Pittsburgh School of Public Health  
Department of Epidemiology  
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### EDUCATION

**2019–Present**                      **University of Pittsburgh School of Medicine**                      **Pittsburgh, PA**  
M.D., Estimated Completion 2027  
Ph.D., Epidemiology, Estimated Completion 2025    *mentor: Dr. Lisa Bodnar*

**2016–2018**                      **Brown University School of Public Health**                      **Providence, RI**  
Sc.M., Biostatistics, May 2018  
Master’s thesis: “Six-month oral medication adherence early in disease course as a predictor of pediatric inflammatory bowel disease-specific outcomes over time”  
*mentor: Dr. Christopher Schmid*

**2012–2016**                      **Brown University**                      **Providence, RI**  
Sc.B., Independent Concentration in Statistics, May 2016  
Graduated *Cum Laude*  
Honors thesis: “Maternal urinary organophosphorous pesticide metabolite concentrations during pregnancy and children’s reciprocal social, repetitive, and stereotypic behaviors at 8 years of age: the HOME study” *mentor: Dr. Joseph Braun*

### COURSES

Multivariable Calculus	Spring 2013
Statistical Analysis of Biological Data	Spring 2014
Statistical Inference I	Fall 2014
Linear Algebra	Fall 2014
Likelihood (maximum likelihood estimation)*	Spring 2015
Epidemiology of Chronic Diseases*	Spring 2015
Global Health Epidemiology*	Spring 2015
Computational Probability and Statistics	Fall 2015
Foundations in Epidemiologic Research Methods	Fall 2015
Principles of Biostatistics and Data Analysis	Fall 2015
Environmental and Occupational Epidemiology	Spring 2016
Applied Regression Analysis	Spring 2016
Probability and Statistical Inference	Fall 2016
Statistical Computing I	Fall 2016
Practical Data Analysis	Fall 2016
Clinical Trials Methodology	Fall 2016
Intermediate Methods in Epidemiologic Research	Spring 2017

Programming for Health Data Science	Spring 2017
Community Mapping and Introductory Spatial Analysis	Fall 2021
Introduction to SAS	Fall 2021
Epidemiologic Basis of Disease Control	Fall 2021
Epidemiological Methods I	Spring 2022
Applied Regression Analysis	Spring 2022

\*courses taken during semester abroad at the University of Edinburgh

## **EXPERIENCES**

**July 2021–Present**      **Graduate Student Researcher,**  
**University of Pittsburgh Graduate School of**  
**Public Health**      **Pittsburgh, PA**

Maternal diet/nutrition epidemiology research investigating the relationship between dietary intake during pregnancy among nulliparous women and various gestational and birth outcomes in order to update guidelines on optimal weight gain and nutrition during pregnancy. With Dr. Lisa Bodnar. Data from the multicenter Nulliparous Pregnancy Outcomes Study: Monitoring Mothers-to-Be (nuMoM2b) Database

**Aug. – Dec. 2021**      **Teaching Assistant,**  
**University of Pittsburgh Graduate School of**  
**Public Health**      **Pittsburgh, PA**

One of seven graduate teaching assistants for the MPH curriculum required course Principles of Epidemiology, directed by professors Thomas Songer and Tina Costacou. Duties involved leading didactic recitation sessions for groups of 20 students and for all 220 students, holding a weekly office hour, updating the course website, proctoring exams, and grading homework assignments and written exams

**June 2019 – July 2021**      **Graduate Student Researcher,**  
**University of Pittsburgh Graduate School of**  
**Public Health**      **Pittsburgh, PA**

Maternal/prenatal epidemiology research investigating the association between pre-conception maternal body mass index and risk of congenital heart disease in offspring and how this relationship may be modified by serum concentrations of fetal-placental hormones measured in the first trimester of pregnancy. With Dr. Jennifer Adibi. Data from the Magee Obstetric Maternal & Infant (MOMI) Database

**2017–2019**      **Clinical Research Coordinator and Statistician,**  
**The Children’s Hospital of Philadelphia**      **Philadelphia, PA**

Pediatric cardiology research protocol, institutional review board, and data acquisition management, with emphasis on statistical analysis of study data. Research focus: comparing the effectiveness of catheterization procedures and decision-making practices across centers in the U.S. With Dr. Michael O’Byrne

**2016–2017**                **Graduate Student Researcher,**  
**Hasbro Children’s Hospital, Lifespan Corporation**                **Providence, RI**  
Clinical epidemiology research in pediatric gastroenterology and child/adolescent behavioral psychology: investigating the relationship between oral medication adherence and adverse inflammatory bowel disease outcomes over time. With Drs. Jason Shapiro, David Barker, Debra Lobato-Barrera, and Neal LeLeiko

**2015–2016**                **Undergraduate Student Researcher,**  
**Brown University School of Public Health**                **Providence, RI**  
Environmental, maternal/prenatal epidemiology research of *in utero* pesticide exposure and adverse child neurological outcomes, advised by Dr. Joseph Braun. Data from Health Outcomes and Measures of the Environment (HOME) Study

**June – Aug. 2015**      **Undergraduate Student Research Fellow,**  
**Brown University**                **Providence, RI**  
Brown undergraduate teaching and research award (UTRA) summer fellowship  
Environmental, maternal/prenatal epidemiology research under Dr. Joseph Braun

**Spring 2015**            **Undergraduate Student Researcher,**  
**University of Edinburgh Centre for**  
**Population Health Sciences**                **Edinburgh, Scotland, UK**  
Systematic review and meta-analysis literature search of the relationship between statin use and non-cardiovascular disease adverse outcomes. With Drs. Danijela Gasevic and Evropi Theodoratou

**June – Aug. 2014**      **Student Researcher,**  
**University of Massachusetts, Boston**                **Boston, MA**  
Maternal/prenatal epidemiologic research on the association of biologic medication CIMZIA® on adverse child neurological outcomes. Student researcher under Dr. Jane Adams, Chair of Psychology Department: statistical analysis of MotherToBaby studies of anti-TNF drug effects on human pregnancy outcomes; conducting interviews with Dorchester, MA WIC-enrolled women and statistical analysis for additional pregnancy outcome studies

**June – Aug. 2013**      **Undergraduate Research Fellow,**  
**Fox Chase Cancer Center**                **Philadelphia, PA**  
Student researcher in Dr. Elizabeth Hopper-Borge’s lab: performing cellular assays, blots, and cell culture to characterize and inhibit MRP7, a membrane protein pump involved in the efflux of anti-cancer agents, in order to gain insight into potential breast and lung cancer treatments

**UNIVERSITY CAMPUS / COMMUNITY ACTIVITIES**

**Pitt/CMU MSTP interviewing committee**                **2019–Present**  
Student interviewer as part of the admission process for MSTP applicants in admission cycles fall 2019, fall 2020, and fall 2021

<b>Pitt/CMU MSTP House coordinator</b>	<b>2021–Present</b>
Serving as one of two upperclassmen organizing social and academic mentorship activities for the students in MSTP Advisory House 3	
<b>Pitt/CMU MSTP student mentor</b>	<b>2021–Present</b>
Serving as an upperclassman mentor assigned to a first-year student in the program	
<b>University of Pittsburgh School of Medicine FAST student advisor</b>	<b>2020–2021</b>
Second-year medical student mentor to five first-year medical students in my assigned Faculty and Students Together (FAST) group	
<b>ScholarRx Brick author</b>	<b>Sept. 2020 – Feb. 2021</b>
Invited as a content expert to be first author of a new brick (module) entitled “Tools of Epidemiology” as part of the new Biostatistics and Study Design curriculum available to medical students preparing for the United States Medical Licensing Examination	
<b>University of Pittsburgh Scope and Scalpel pit orchestra</b>	<b>2020–2021</b>
Cellist in 2020 student production <i>The Lyme King</i>	
<b>University of Pittsburgh Women’s Health Area of Concentration</b>	<b>2019–Present</b>
Student member attending weekly and monthly faculty talks, completing a women’s health service project and clinical rotation	
<b>University of Pittsburgh Longitudinal Alliance Project</b>	<b>2019–Present</b>
Medical student partner to a UPMC patient with chronic illness; accompany my patient to medical appointments and visit with her outside of the clinic at least four times per year	
<b>Pitt/CMU MSTP Second Look committee</b>	<b>2019–2020</b>
Student co-coordinator of multi-day campus revisit events for the 2020 accepted MSTP applicants	
<b>Down The Line And Beyond</b>	<b>2017–2019</b>
General health, fitness, and wellness consultant for a not-for-profit tennis organization serving disadvantaged children in Greater Philadelphia	

**AWARDS AND HONORS**

<b>Honors for performance in assistant teaching, University of Pittsburgh Graduate School of Public Health</b>	<b>Aug. – Dec. 2021</b>
Course: Principles of Epidemiology	
<b>Graduated <i>Cum Laude</i>, Brown University</b>	<b>May 2016</b>
<b>Department of Epidemiology nomination for Brown University’s Distinguished Thesis Prize</b>	<b>May 2016</b>

**Best Undergraduate Poster, Brown University School of Public Health Research Day**

**April 2016**

**Brown Undergraduate Teaching and Research Award (UTRA)**  
Summer research fellowship

**June – August 2015**

## **SCHOLARSHIPS**

University of Pittsburgh Graduate School of Public Health Graduate Student Researcher: tuition support and stipend provided by the NIH, award number 5R01HD094777-04

(PI: Lisa Bodnar)

Pitt/CMU MSTP tuition support and stipend provided by the NIH, award number T32GM008208

Brown University Department of Biostatistics partial tuition scholarship award

National Merit Scholarship Winner

Billie Jean King Character Award

Makefield Women's Association Merit Scholarship

Sanofi Merit Scholarship

## **PUBLICATIONS**

1. **Millenson ME**. In: Le T, Stevenson F, Boqambar H, et al, eds. ScholarRx Bricks: Biostatistics and Study Design Collection. Available at [www.usmle-rx.com](http://www.usmle-rx.com). Published 2021.
2. Janson CM, **Millenson ME**, Okunowo O, Dai D, Christmyer Z, Tan RB, Iyer VR, Shah MJ, O'Byrne ML. Incidence of life-threatening events in children with Wolff-Parkinson-White syndrome: analysis of a large claims database. *Heart Rhythm*. 2021 Dec 10;S1547-5271(21)02434-6. [[link](#)]
3. Adibi JJ, Layden AJ, Birru RL, Miragaia A, Xun X, Smith MC, Yin Q, **Millenson ME**, O'Connor TG, Barrett ES, Snyder NW. First trimester mechanisms of gestational sac placental and foetal teratogenicity: a framework for birth cohort studies. *Human Reproduction Update*. 2021 Jun 22;27(4):747-770. [[link](#)]
4. O'Byrne ML, Kennedy KF, Steven JM, Hill KD, Chamberlain RC, **Millenson ME**, Smith CL, Dori Y, Gillespie MJ, Rome JJ, Glatz AC. Outcomes of operator-directed sedation and anesthesiologist care in the pediatric/congenital catheterization laboratory: a study utilizing data from the IMPACT registry. *JACC: Cardiovascular Interventions*. 2021 Feb 22;14(4):401-13. [[link](#)]
5. Gilmer GG, **Millenson ME**, Garcia GL. "A two-step guide to busting misinformation." *Pittsburgh Post-Gazette*. 16 December 2020. <<https://www.post-gazette.com/opinion/2020/12/16/A-two-step-guide-to-busting-misinformation/stories/202012160040>>.
6. O'Byrne ML, **Millenson ME**, Grady CB, Huang J, Bamat NA, Munson DA, Song L, Dori Y, Gillespie MJ, Rome JJ, Glatz AC. Trends in transcatheter and operative closure of patent ductus arteriosus in neonatal intensive care units: analysis of data from the Pediatric Health Information Systems Database. *American Heart Journal*. 2019 Nov 1;217:121-30. [[link](#)]

7. O’Byrne ML, Glatz AC, Faerber JA, Seshadri R, **Millenson ME**, Mi L, Shinohara RT, Dori Y, Gillespie MJ, Rome JJ, Kawut SM. Interhospital variation in the costs of pediatric/congenital cardiac catheterization laboratory procedures: analysis of data from the Pediatric Health Information Systems Database. *Journal of the American Heart Association*. 2019 May 7;8(9):e011543. [\[link\]](#)
8. O’Byrne ML, **Millenson ME**, Steven JM, Gillespie MJ, Dori Y, Glatz AC, Rome JJ. Operator-directed procedural sedation in the congenital cardiac catheterization laboratory. *JACC: Cardiovascular Interventions*. 2019 May 13;12(9):835-43. [\[link\]](#)
9. O’Byrne ML, Glatz AC, Song L, Griffis HM, **Millenson ME**, Gillespie MJ, Dori Y, DeWitt AG, Mascio CE, Rome JJ. Association between variation in preoperative care before arterial switch operation and outcome: an analysis of data from the Pediatric Health Information Systems Database. *Circulation*. 2018 Nov 6;138(19):2119-29. [\[link\]](#)
10. He Y, Li X, Gasevic D, Brunt E, McLachlan F, **Millenson M**, Timofeeva M, Ioannidis J, Campbell H, Theodoratou E. Statins and multiple noncardiovascular outcomes: umbrella review of meta-analyses of observational studies and randomized controlled trials. *Annals of Internal Medicine*. 2018 Oct. 16;169. [\[link\]](#)
11. **Millenson ME**, Schmid CH, Sullivan AJ, Barker DH, Shapiro JM, Mallette M, Lobato DJ, LeLeiko NS. “Six-month oral medication adherence early in disease course as a predictor of pediatric inflammatory bowel disease-specific outcomes over time” (August 2017). Master’s thesis. *Brown University Department of Biostatistics Theses and Dissertations*. Brown Digital Repository. Brown University Library. [\[link\]](#)
12. **Millenson ME**, Braun JM, Calafat AM, Barr DB, Huang YT, Chen A, Lanphear BP, Yolton K. Urinary organophosphate insecticide metabolite concentrations during pregnancy and children’s interpersonal, communication, repetitive, and stereotypic behaviors at 8 years of age: the HOME study. *Environmental Research*. 2017 Aug. 1;157:9-16. [\[link\]](#)
13. **Millenson ME**, Braun JM, Huang YT, Yolton K. “A comparison of the association between prenatal organophosphate pesticide exposure and autistic-behaviors in children, based on *PONI* genotype” (April 2016). Undergraduate senior honors thesis. *Brown University Undergraduate Honors and Senior Theses*. Brown Digital Repository. Brown University Library. [\[link\]](#)
14. **Millenson ME**, Braun JM, Huang YT, Xu Y, Chen A, Lanphear BP, Yolton K. “A comparison of the association between prenatal organophosphate pesticide exposure and autistic-behaviors in children, based on *PONI* genotype” (April 2016). Undergraduate senior honors research poster. *Brown University Public Health Research Day*. Brown Digital Repository. Brown University Library. [\[link\]](#)
15. **Millenson ME**, Romano ME, Yolton K, Chen A, Lanphear BP, Braun JM. “Association between prenatal organophosphate pesticide exposure and autistic-behaviors in children in the Health Outcomes and Measures of the Environment Study, Cincinnati, Ohio” (August 2015). Undergraduate summer research poster. *Brown University Summer Research Symposium*. Brown Digital Repository. Brown University Library. [\[link\]](#)

## **ABSTRACTS**

### **American College of Cardiology (ACC) Scientific Sessions Annual Conference**

**March 2020**

Accepted abstract title: “Outcomes of operator-directed sedation and anesthesiologist care in the pediatric/congenital catheterization laboratory”

Authors: O’Byrne ML, Kennedy KF, Steven JM, Hill KD, Chamberlain RC, **Millenson ME**, Smith CL, Dori Y, Gillespie MJ, Rome JJ, Glatz AC

### **American Heart Association (AHA) Scientific Sessions Annual Conference**

**August 2018**

Accepted abstract title: “Incidence of life-threatening events in children with Wolff-Parkinson-White Syndrome”

Authors: Janson CM, **Millenson ME**, Dai D, Tan RB, Iyer VR, Vetter VL, Vogel RL, Shah MJ, O’Byrne ML

### **North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN) Annual Conference**

**June 2017**

Accepted abstract title: “Six-month oral medication adherence early in disease course as a predictor of inflammatory bowel disease-specific outcomes over time”

Authors: **Millenson ME**, Shapiro JM, Barker DH, Mallette M, Moniz H, Amaral K, Bright R, Kopel S, Hagin S, McQuaid E, Seifer R, Schmid CH, Shah S, Sands B, Lobato DJ, LeLeiko NS

## **PRESENTATIONS**

### **Pitt/CMU MSTP Annual Scientific Retreat Poster Session**

**August 2019**

Presentation entitled: “Preconception maternal body mass index and congenital heart disease: laying the foundation for a study on placental mediation”

### **North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN) Annual Conference**

**November 2017**

Presentation entitled: “Six-month oral medication adherence early in disease course as a predictor of inflammatory bowel disease-specific outcomes over time”

### **Brown University School of Public Health Research Day**

**April 2016**

Presentation entitled: “A comparison of the association between prenatal organophosphate pesticide exposure and autistic-behaviors in children, based on *PONI* genotype”

### **Brown University Summer Research Symposium**

**August 2015**

Presentation entitled: “Association between prenatal organophosphate pesticide exposure and autistic-behaviors in children in the Health Outcomes and Measures of the Environment Study, Cincinnati, Ohio”

## **CONFERENCES ATTENDED**

<b>June 2015</b>	<b>Teratology Society Annual Conference</b>	<b>Montréal, Quebec</b>
<b>August 2017</b>	<b>International Society for Pharmacoepidemiology (ISPE) Annual Conference</b>	<b>Montréal, Quebec</b>
<b>November 2017</b>	<b>North American Society for Pediatric Gastroenterology, Hepatology, and Nutrition (NASPGHAN) Annual Conference</b>	<b>Las Vegas, NV</b>

## **SKILLS**

Epidemiologic / biostatistics / public health research  
Data analysis  
R, RStudio, RMarkdown  
SAS  
STATA  
QGIS  
GeoDa  
SQL  
Julia  
MATLAB  
REDCap  
Microsoft Office suite

## **HOBBIES**

Tennis matchplay  
Road cycling  
Cello performance  
DSLR photography  
Bass guitar personal practice