

Yu-Han Chiu, MD, ScD

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Appointments	<i>Assistant Professor (Tenure-Track)</i> Department of Epidemiology Brown University School of Public Health <i>Assistant Professor (Tenure-Track)</i> Department of Public Health Sciences Penn State College of Medicine <i>Research Scientist</i> CAUSALab and Department of Epidemiology, Harvard T.H. Chan School of Public Health (HSPH) <i>Postdoctoral fellow and Research Associate</i> Department of Epidemiology, HSPH	July 2025 - Present July 2023 - June 2025 2022-2023 2017-2022
Research Interests	Causal inference from complex longitudinal data; target trial emulation; transportability and generalizability; reproductive epidemiology; nutritional epidemiology	
Education	<i>Doctor of Science (Sc.D.)</i> Departments of Nutrition and Epidemiology HSPH <i>Master of Public Health (MPH),</i> Quantitative Methods HSPH <i>Doctor of Medicine (MD)</i> National Taiwan University, Taiwan	2013-2017 2012-2013 2004-2011
Honors	Rising Star Award (selected; announcement forthcoming June 2026), Society of Pediatric and Perinatal Epidemiologic Research Maximizing Investigators' Research Award, National Institutes of Health (NIH) American Heart Association (AHA) Fellowship	2026 2024-2029 2021-2023

HSPH Postdoctoral Association Travel Award	2022
NVIDIA Computational Hardware Grant	2019
Emerging Leader Award in Nutrition Science, Nutrition Conference	2018
Harvard Chan National Institute of Environmental Health Sciences Center Pilot Grant	2016
American Society for Reproductive Medicine (ASRM) Travel Award	2016
James Souverine Gallo '27 Memorial Scholarship, Irene M. & Fredrick J. Stare Nutrition Education Fund, Harvard University	2014-2017
ASRM Society for Male Reproduction and Urology Traveling Scholar Award	2014
Taiwanese Physician Scholarship, Harvard University	2012-2014

**First/Senior
Authored
Publications**

1. **Chiu Y-H** & Wen L. What are we estimating? Revisiting standard nutritional models through the target trial framework. *Am J Epidemiol.* 2026 Mar 10:kwag053. doi: 10.1093/aje/kwag053. Epub ahead of print. PMID: 41804804.
2. Dalia S, Aguilar-López MA, Gomez-Flores-Ramos L, Rodriguez-Ramirez S, Tobias DK, Lajous M & **Chiu Y-H**. Evaluating the 2023 Mexican Dietary Guidelines for Type 2 Diabetes Prevention: A Target Trial Emulation in Mexican Women. *Am J Epidemiol.* 2026 Feb 23:kwag037. doi: 10.1093/aje/kwag037. Epub ahead of print. PMID: 41730256
3. Ahlqvist VH, Lee BK & **Chiu Y-H**. Sibling comparisons to account for confounding in observational studies. *JAMA.* 2026 Jan 7. PMID: 41499111.
4. Dahabreh IJ, Ung L, Hernán MA & **Chiu Y-H**. The role of assignment in defining and identifying causal effects in randomized trials. *Epidemiology.* In press. 2026.
5. **Chiu Y-H** & Wen L. Identification and estimation of the average causal effects under dietary substitution strategies. *Stat Med.* 2025 Feb 28;44(5):e70007. doi: 10.1002/sim.70007. PMID: 39976288.
6. **Chiu Y-H**, Huybrechts KF, Paterno E, Yland JJ, Cesta CE, Bateman BT, Seely EW, Hernán MA & Hernández-Díaz S. Metformin use in the first trimester and risk of congenital anomalies: emulating a target trial using real-world data. *Annals of Internal Medicine.* 2024 Jul;177(7):862-870. PMID: 38885505.
7. **Chiu Y-H** & Dahabreh IJ. Selection on treatment in the target population of generalizability and transportability analyses. arXiv preprint arXiv:2209.08758. 2022.
8. **Chiu Y-H**, Huybrechts KF, Zhu Y, Straub L, Bateman BT, Logan R & Hernández-Díaz S. Internal validation of gestational age estimation algorithms in healthcare databases using pregnancies conceived with fertility procedures. *Am J Epidemiol.* 2024 Apr 6. PMID: 38583933.
9. **Chiu Y-H**, Wen L, McGrath S, Logan R, Dahabreh IJ & Hernán MA. Evaluating model specification when using the parametric g-formula in the presence of censoring. *Am J Epidemiol.* 2023 Nov 3;192(11):1887-1895. PMID: 37338985.

10. **Chiu Y-H**, Yland JJ, Rinaudo P, Hsu J, McGrath S, Hernández-Díaz S & Hernán MA. Effectiveness and safety of intrauterine insemination versus assisted reproductive technology: emulating a target trial using a healthcare database of administrative claims. *Fertility and Sterility*. 2022 May; 117(5):981-991. PMID: 35305813.
11. **Chiu Y-H**, Chavarro JE, Dickerman BA, Manson JE, Mukamal KJ, Rexrod KM, Rimm EB & Hernán MA. Estimating the effect of nutritional interventions using observational data: the American Heart Association's 2020 Dietary Goals and Mortality. *Am J Clin Nutr*. 2021 Aug 2; 114(2):690-730. PMID: 34041538.
12. **Chiu Y-H**, Stensrud MJ, Dahabreh IJ, Rinaudo P, Diamond MP, Hsu J, Hernández-Díaz S & Hernán MA. The effect of prenatal treatments on offspring events in the presence of competing events: application to a randomized trial of fertility therapies. *Epidemiology*. 2020. Sep;31(5):636-643. PMID: 32501812.
13. **Chiu Y-H**, Rifas-Shiman SL, Kleiman K, Oken E & Young JG. Effect of intergenerational exposure interventions on adolescent outcomes: An application of inverse probability weighting to longitudinal pre-birth cohort data. *Paediatr Perina Epidemiol*. 2020 May; 34(3):366-375. PMID: 32162715.
14. **Chiu Y-H**. Well-defined interventions for nutritional studies: from target trials to nutritional modeling. *Am J Clin Nutr*. 2022 Jan 11;115(1):3-5. PMID: 34849525. (Editorial)
15. **Chiu Y-H**, Fadadu RP, Gaskins AJ, Rifas-Shiman SL, Laue HE, Moley KH, Hivert MF, Baccarelli A, Oken E, Chavarro JE & Cardenas A. Dietary fat intake during early pregnancy is associated with cord blood DNA methylation at IGF2 and H19 genes in newborns. *Environ Mol Mutagen*. 2021 Aug; 62 (7): 388-398. PMID: 34288135.
16. **Chiu Y-H**, Sandoval-Insausti H, Ley SH, Bhupathiraju SN, Hauser R, Rimm EB, Manson JE, Sun Q & Chavarro JE. Association between intake of fruits and vegetables by pesticide residue status and coronary heart disease risk. *Environ Int*. 2019 Aug 29; 132:105113. PMID: 31473415.
17. Li MC, Mínguez-Alarcón L, Bellavia A, Williams PL, James-Todd T, Hauser R, Chavarro JE & **Chiu Y-H**** . Serum beta-carotene modifies the association between phthalate mixtures and insulin resistance: The National Health and Nutrition Examination Survey 2003-2006. *Environ Research*. 2019 Nov;178:108729. PMID: 31521963. **senior author.
18. **Chiu Y-H**, Williams PL, Gillman MW, Gaskins AJ, Mínguez-Alarcón L, Souter I, Toth TL, Ford JB, Hauser R & Chavarro JE. Association between pesticide residue intake from consumption of fruits and vegetables and pregnancy outcomes among women undergoing infertility treatment with assisted reproductive technology. *JAMA Intern Med*. 2018;178(1):17-26. PMID: 29084307
19. Chang SH, Kang YN, Chiu HY & **Chiu Y-H**** . A Systematic Review and Meta-Analysis Comparing Pigtail Catheter and Chest Tube as the Initial Treatment for Pneumothorax. *Chest*. 2018 May;153(5):1201-1212. PMID: 29452099. **senior author.
20. **Chiu Y-H**, Williams PL, Gillman MW, Hauser R, Rifas-Shiman SL, Bellavia A, Fleisch AF, Oken E & Chavarro JE. Maternal intake of pesticide residues from fruits and vegetables in relation to fetal growth. *Environ Int*. 2018;119:421-428. PMID: 30029096.
21. **Chiu Y-H**, Bertrand KA, Zhang S, Laden F, Epstein MM, Rosner BA, Chiuve S, Campos H, Giovannucci EL, Chavarro JE & Birmann BM. A prospective analysis of

- circulating saturated and monounsaturated fatty acids and risk of non-Hodgkin lymphoma. *Int J Cancer*. 2018 Oct 15;143(8):1914-1922. PMID: 29756258.
22. **Chiu Y-H**, Karmon AE, Gaskins AJ, Arvizu M, Williams PL, Souter I, Rueda BR, Hauser R & Chavarro JE. Serum omega-3 fatty acids and treatment outcomes among women undergoing assisted reproduction. *Hum Reprod*. 2018;33(1):156-165. PMID: 29136189.
 23. **Chiu Y-H**, Bellavia A, James-Todd T, Correia KF, Valeri L, Messerlian C, Ford JB, Mínguez-Alarcón L, Calafat AM, Hauser R & Williams PL. Evaluating effects of prenatal exposure to phthalate mixtures on birth weight: A comparison of three statistical approaches. *Environ Int*. 2018;113:231-239. PMID: 29453090.
 24. **Chiu Y-H**, Williams PL, Mínguez-Alarcon L, Gillman MW, Sun Q, Ospina M, Calafat AM, Hauser R & Chavarro JE. Comparison of questionnaire-based estimation of pesticide residue intake from fruits and vegetables with urinary concentrations of pesticide biomarkers. *J Expo Sci Environ Epidemiol*. 2018;28(1):31-39. PMID: 28930298. (Featured in the Collection of the best of Journal of Exposure Science & Environmental Epidemiology 2018-2019)
 25. **Chiu Y-H**, Chavarro JE & Souter I. Diet and female fertility: Doctor, what should I eat? *Fertil Steril*. 2018 Sep;110(4):560-569. PMID: 30196938. (Review)
 26. **Chiu Y-H**, Edifor R, Rosner B, Nassan F, Gaskins AJ, Mínguez-Alarcón L, Williams PL, Tanrikut C, Hauser R & Chavarro JE. What does a single semen sample tell you? Implications for male factor infertility research. *Am J Epidemiol*. 2017;186(8):918-926. PMID: 28541378.
 27. **Chiu Y-H**, Mínguez-Alarcón L, Ford JB, Keller M, Seely EW, Messerlian C, Petrozza J, Williams PL, Ye X, Calafat AM, Hauser R & James-Todd T; EARTH Study Team. Trimester-specific urinary bisphenol A concentrations and blood glucose levels among women from a fertility clinic. *J Clin Endocrinol & Metab*. 2017; 102(4): 1350-1357. PMID: 28323984.
 28. Souter I*, **Chiu Y-H***, Batsis M, Afeiche MC, Williams PL, Hauser R & Chavarro JE. The association of protein intake (amount and type) with ovarian antral follicle counts among infertile women: results from the EARTH prospective study cohort. *BJOG*. 2017; 124(10):1547-1555. PMID: 28278351. *co-first author.
 29. **Chiu Y-H**, Gaskins AJ, Williams PL, Mendiola J, Jorgensen N, Levine H, Swan SH & Chavarro JE. Intake of fruits and vegetables with low-to-moderate pesticide residues is positively associated with semen quality parameters among young healthy men. *J Nutr*. 2016;146(5):1084-1092. PMID: 27075904.
 30. Hu Y*, **Chiu Y-H***, Hauser R, Chavarro J & Sun Q. Overall and class-specific scores of pesticide residues from fruits and vegetables as a tool to rank intake of pesticide residues in United States: A validation study. *Environ Int*. 2016;92:294-300. PMID: 27128714. *co-first author.
 31. **Chiu Y-H**, Afeiche MC, Gaskins AJ, Williams PL, Petrozza JC, Tanrikut C, Hauser R & Chavarro JE. Fruit and vegetable intake and their pesticide residues in relation to semen quality among men from a fertility clinic. *Hum Reprod*. 2015;30: 1342-1351. PMID: 25824023.
 32. **Chiu Y-H**, Afeiche MC, Gaskins AJ, Williams PL, Mendiola J, Jorgensen N, Swan SH & Chavarro JE. Sugar-sweetened beverage intake in relation to semen quality and reproductive hormone levels in young men. *Hum Reprod*. 2014;29: 1575-1584. PMID:

24812311.

**Co-authored
Publications**

33. Shang Y, **Chiu Y-H**, Kong L. A Latent Variable Approach for Causal Effect Estimation Under Misclassified Treatment Assignment. *Stat Med*. 2026 Apr;45(8-9):e70528. PMID: 41956974.
34. Shan Y, **Chiu Y-H** & Lang K. Robust Propensity Score Estimation via Loss Function Calibration. *Statistical Methods in Medical Research*. 2025 Mar;34(3):457-472. PMID: 39943776.
35. McGee EE, Hernán MA, Giovannucci E, Mucci LA, **Chiu Y-H**, Eliassen AH, Dickerman BA. Estimating the Effects of Lifestyle Interventions on Mortality Among Cancer Survivors: A Methodologic Framework. *Epidemiology*. 2025 Sep 1;36(5):705-718. PMID: 40459173.
36. Kazemi M, Salas-Huetos A, Mitsunami M, **Chiu Y-H**, Hauser R, Souter I, Mínguez-Alarcón L, Chavarro JE; EARTH Study Team. Male partner pesticide residue exposure from fruit and vegetable intake in relation to outcomes of infertility treatment: a prospective cohort study. *Am J Clin Nutr*. 2025 Dec;122(6):1701-1712. PMID: 41338693.
37. Elahy V, **Chiu Y-H**, Patel AV, Rees-Punia E, McCullough ML, Peoples AR, Wang Y. Effectiveness of sustained leisure-time physical activity strategies for obesity-related cancer prevention: an emulated target trial in a prospective US cohort. *BMC Med*. 2025 Oct 27;23(1):580. PMID: 41139777.
38. Kazemi M, **Chiu Y-H**, Mitsunami M, Mínguez-Alarcón L, Hauser R, Souter I, Chavarro J; EARTH Study Team. Associations of Pesticide Residue Exposure from Fruit and Vegetable Intake with Ovarian Reserve. *J Nutr*. 2025 Mar;155(3):957-967. doi: 10.1016/j.tjnut.2024.12.028. Epub 2024 Dec 31. PMID: 39742971; PMCID: PMC11934237.
39. Yland JJ, Huybrechts KF, Wesselink AK, Straub L, **Chiu Y-H**, Seely EW, Paterno E, Bateman BT, Mogun H, Wise LA & Hernández-Díaz S. Perinatal Outcomes Associated With Metformin Use During Pregnancy in Women With Pregestational Type 2 Diabetes Mellitus. *Diabetes Care*. 2024 Sep 1;47(9):1688-1695. PMID: 39042587.
40. Stern D, Ibsen DB, Macdonald CJ, **Chiu Y-H**, Lajous M & Tobias DK. Improving nutrition science begins with asking better questions. *American Journal of Epidemiology*. *Am J Epidemiol*. 2024 Jul 11;kwae110. PMID: 38992167.
41. Guo F, McGee EE, **Chiu Y-H**, Giovannucci E, Mucci LA & Dickerman BA. Evaluating recommendation-based dietary and physical activity strategies for prostate cancer prevention: a target trial emulation in the Health Professionals Follow-up Study. *Am J Epidemiol*. 2024 Jul 5. Epub ahead of print. PMID: 38973750.
42. Ibsen DB, **Chiu Y-H**, Gémes K & Wolk A. Hypothetical 22-Year Intervention With DASH Diet Lowered Risk of Heart Failure in a General Population. *Am J Epidemiol*. 2024 Jan 8;193(1):96-106. Epub ahead of print. PMID: 37656615.
43. Hernández-Díaz S, Huybrechts KF, **Chiu Y-H**, Yland JJ, Bateman BT & Hernán MA. Emulating a target trial of interventions initiated during pregnancy with healthcare databases: the example of COVID-19 vaccination. *Epidemiology*. 2023;34(2):238-246. PMID: 38630512.
44. Yland JJ, **Chiu Y-H**, Rinaudo P, Hsu J, Hernán MA & Hernández-Díaz S. Emulating a target trial of the comparative effectiveness of clomiphene citrate and letrozole for

ovulation induction. *Human Reproduction*. 2022 April 1;37(4): 793-805. PMID: 35048945.

45. Kazemi M, **Chiu YH**, Mitsunami M, Mínguez-Alarcón L, Hauser R, Souter I & Chavarro J; EARTH Study Team. Associations of pesticide residue exposure from fruit and vegetable intake with ovarian reserve. *J Nutr*. 2024 Dec 30. PMID: 39742971.
46. Laugesen K, Veres K, Hernandez-Diaz S, **Chiu Y-H**, Oberg AS, Hsu J, Rinaudo P, Spaan M, Leeuwen FV & Sørensen HT. Overweight or obesity in children born after assisted reproductive technologies in Denmark: A population-based cohort study. *PLoS Med*. 2023;20(12). PMID: 38113196.
47. Cote DJ, Bever AM, **Chiu Y-H**, Sandoval-Insausti H, Smith-Warner SA, Chavarro JE & Stampfer MJ. Pesticide residue intake from fruit and vegetable consumption and risk of glioma. *Am J Epidemiol*. 2022 March 24; 191(5): 825-833. PMID: 35029641.
48. Ardisson Korat AV, **Chiu Y-H**, Bertrand KA, Zhang S, Epstein MM, Rosner BA, Chiuvè S, Campos H, Giovannucci EL, Chavarro JE & Birmann BM. A prospective analysis of red blood cell membrane polyunsaturated fatty acid levels and risk of non-Hodgkin lymphoma. *Leuk Lymphoma*. 2022 Dec;63(14):3351-3361. PMID: 36255154.
49. Garzia NA, Cushing-Haugen K, **Chiu Y-H**, Sandoval-Insausti H, Chavarro JE, Missmer SA & Harris HR. Pesticide residue intake from fruit and vegetable consumption and risk of laparoscopically confirmed endometriosis. *F S Sci*. 2022 Nov;3(4):376-382. PMID: 35598776
50. Sandoval-Insausti H, **Chiu Y-H**, Lee DH, Wang S, Hart JE, Mínguez-Alarcón L, Laden F, Ardisson Korat AV, Birmann B, Heather Eliassen A, Willett WC & Chavarro JE. Intake of fruits and vegetables by pesticide residue status in relation to cancer risk. *Environ Int*. 2021 Nov;156:106744. PMID: 34256297.
51. Ardisson Korat AV, **Chiu Y-H**, Bertrand KA, Zhang S, Epstein MM, Rosner BA, Chiuvè S, Campos H, Giovannucci EL, Chavarro JE & Birmann BM. Red blood cell membrane trans fatty acid levels and risk of non-Hodgkin lymphoma: a prospective nested case-control study. *Am J Clin Nutr*. 2020 Dec 10;112(6):1576-1583. PMID: 33022699.
52. Li MC, **Chiu Y-H**, Gaskins AJ, Mínguez-Alarcón L, Nassan FL, Williams PL, Petrozza J, Hauser R & Chavarro JE. Men's Intake of Vitamin C and β -Carotene Is Positively Related to Fertilization Rate but Not to Live Birth Rate in Couples Undergoing Infertility Treatment. *J Nutr*. 2019 Nov 1;149(11):1977-1984. PMID: 31287143.
53. Mínguez-Alarcón L, **Chiu Y-H**, Nassan FL, Williams PL, Petrozza J, Ford JB, Calafat AM, Hauser R & Chavarro JE. Urinary concentrations of benzophenone-3 and reproductive outcomes among women undergoing infertility treatment with assisted reproductive technologies. *Sci Total Environ*. 2019 May 2;678:390-398. PMID: 31077917.
54. Li MC, Nassan FL, **Chiu Y-H**, Mínguez-Alarcón L, Williams PL, Souter I, Hauser R & Chavarro JE. Intake of Antioxidants in Relation to Infertility Treatment Outcomes with Assisted Reproductive Technologies. *Epidemiology*. 2019 May;30(3):427-434. PMID: 30789428.
55. Mínguez-Alarcón L, Messerlian C, Bellavia A, Gaskins AJ, **Chiu Y-H**, Ford JB, Azevedo AR, Petrozza JC, Calafat AM, Hauser R & Williams PL. Urinary concentrations of bisphenol A, parabens and phthalate metabolite mixtures in relation to reproductive success among women undergoing in vitro fertilization. *Environ Int*. 2019

May;126:355-362. PMID: 30826614.

56. Li MC, Mínguez-Alarcón L, Arvizu M, **Chiu Y-H**, Ford JB, Williams PL, Attaman J, Hauser R & Chavarro JE. Waist circumference in relation to outcomes of infertility treatment with assisted reproductive technologies. *Am J Obstet Gynecol*. 2019 Jun;220(6):578.e1-578.e13. PMID: 30763543.
57. Gaskins AJ, Nassan FL, **Chiu Y-H**, Arvizu M, Williams PL, Keller MG, Souter I, Hauser R & Chavarro JE. Dietary patterns and outcomes of assisted reproduction. *Am J Obstet Gynecol*. 2019 Jun;220(6):567.e1-567.e18. PMID: 30763543.
58. Bellavia A, **Chiu Y-H**, Brown FM, Mínguez-Alarcón L, Ford JB, Keller M, Petrozza J, Williams PL, Ye X, Calafat AM, Hauser R & James-Todd T. Urinary concentrations of parabens mixture and pregnancy glucose levels among women from a fertility clinic. *Environ Res*. 2019 Jan;168:389-396. PMID: 30384233.
59. Mínguez-Alarcón L, Williams PL, **Chiu Y-H**, Gaskins AJ, Nassan FL, Dadd R, Petrozza J, Hauser R & Chavarro JE. Secular trends in semen parameters among men attending a fertility center between 2000 and 2017: Identifying potential predictors. *Environ Int*. 2018 Dec;121(Pt 2):1297-1303. PMID: 30389382.
60. Nassan FL, **Chiu Y-H**, Vanegas JC, Gaskins AJ, Williams PL, Ford JB, Attaman J, Hauser R & Chavarro JE. Intake of protein-rich foods in relation to outcomes of infertility treatment with assisted reproductive technologies. *Am J Clin Nutr*. 2018 Nov 1;108(5):1104-1112. PMID: 30475972.
61. Mínguez-Alarcón L, Gaskins AJ, **Chiu Y-H**, Messerlian C, Williams PL, Ford JB, Souter I, Hauser R & Chavarro JE. Type of underwear worn and markers of testicular function among men attending a fertility center. *Hum Reprod*. 2018 Sep 1;33(9):1749-1756. PMID: 30102388.
62. James-Todd TM, **Chiu Y-H**, Messerlian C, Mínguez-Alarcón L, Ford JB, Keller M, Petrozza J, Williams PL, Ye X, Calafat AM & Hauser R. Trimester-specific phthalate concentrations and glucose levels among women from a fertility clinic. *Environ Health*. 2018 Jun 14;17(1):55. PMID: 29898728.
63. Messerlian C, Williams PL, Ford JB, Chavarro JE, Mínguez-Alarcón L, Dadd R, Braun JM, Gaskins AJ, Meeker JD, James-Todd T, **Chiu Y-H**, Nassan FL, Souter I, Petrozza J, Keller M, Toth TL, Calafat AM & Hauser R. The Environment and Reproductive Health (EARTH) Study: A Prospective Preconception Cohort. *Hum Reprod Open*. 2018 Feb;2018(2). PMID: 29888739.
64. Segal TR, Mínguez-Alarcón L, **Chiu Y-H**, Williams PL, Nassan FL, Dadd R, Ospina M, Calafat AM & Hauser R. Urinary concentrations of 3-(diethylcarbamoyl)benzoic acid (DCBA), a major metabolite of N,N-diethyl-m-toluamide (DEET) and semen parameters among men attending a fertility center. *Hum Reprod*. 2017 Dec 1;32(12):2532-2539. PMID: 29077936.
65. Abadia L, **Chiu Y-H**, Williams PL, Toth TL, Souter I, Hauser R, Chavarro JE & Gaskins AJ. The association between pre-treatment maternal alcohol and caffeine intake and outcomes of assisted reproduction in a prospectively followed cohort. *Hum Reprod*. 2017 Sep 1;32(9):1846-1854. PMID: 28854726.
66. Mínguez-Alarcón L, Souter I, **Chiu Y-H**, Williams PL, Ford JB, Ye X, Calafat AM & Hauser R. Urinary concentrations of cyclohexane-1,2-dicarboxylic acid monohydroxy isononyl ester, a metabolite of the non-phthalate plasticizer di(isononyl)cyclohexane-1,2-dicarboxylate (DINCH), and markers of ovarian response among women attending a

- fertility center. *Environ Res.* 2016 Nov;151:595-600. PMID: 27591839.
67. Mínguez-Alarcón L, Gaskins AJ, **Chiu Y-H**, Souter I, Williams PL, Calafat AM, Hauser R & Chavarro JE. Dietary folate intake and modification of the association of urinary bisphenol A concentrations with in vitro fertilization outcomes among women from a fertility clinic. *Reprod Toxicol.* 2016 Oct;65:104-112. PMID: 27423903.
 68. Abadia L, Gaskins AJ, **Chiu Y-H**, Williams PL, Keller M, Wright DL, Souter I, Hauser R & Chavarro JE. Serum 25-hydroxyvitamin D concentrations and treatment outcomes of women undergoing assisted reproduction. *Am J Clin Nutr.* 2016 Sep;104(3):729-35. PMID: 27465382.
 69. Gaskins AJ, **Chiu Y-H**, Williams PL, Keller MG, Toth TL, Hauser R & Chavarro JE. Maternal whole grain intake and outcomes of in vitro fertilization. *Fertil Steril.* 2016 Jun;105(6):1503-1510.e4. PMID: 26926253.
 70. James-Todd TM, **Chiu Y-H** & Zota AR. Racial/ethnic disparities in environmental endocrine disrupting chemicals and women's reproductive health outcomes: epidemiological examples across the life course. *Curr Epidemiol Rep.* 2016 Jun;3(2):161-180. PMID: 28497013.
 71. Xia W, **Chiu Y-H**, Afeiche MC, Williams PL, Ford JB, Tanrikut C, Souter I, Hauser R & Chavarro JE. Impact of men's dairy intake on assisted reproductive technology outcomes among couples attending a fertility clinic. *Andrology.* 2016 Mar;4(2):277-83. PMID: 26825777.
 72. Afeiche MC, **Chiu Y-H**, Gaskins AJ, Williams PL, Souter I, Wright DL, Hauser R & Chavarro JE. Dairy intake in relation to in vitro fertilization outcomes among women from a fertility clinic. *Hum Reprod.* 2016 Mar;31(3):563-71. PMID: 26787645.
 73. Chavarro JE, Mínguez-Alarcón L, **Chiu Y-H**, Gaskins AJ, Souter I, Williams PL, Calafat AM & Hauser R. Soy Intake Modifies the Relation Between Urinary Bisphenol A Concentrations and Pregnancy Outcomes Among Women Undergoing Assisted Reproduction. *J Clin Endocrinol Metab.* 2016 Mar;101(3):1082-90. PMID: 26815879.
 74. Mínguez-Alarcón L, **Chiu Y-H**, Messerlian C, Williams PL, Sabatini ME, Toth TL, Ford JB, Calafat AM & Hauser R. Urinary paraben concentrations and in vitro fertilization outcomes among women from a fertility clinic. *Fertil Steril.* 2016 Mar;105(3):714-721. PMID: 26654974.
 75. Messerlian C, Souter I, Gaskins AJ, Williams PL, Ford JB, **Chiu Y-H**, Calafat AM & Hauser R. Urinary phthalate metabolites and ovarian reserve among women seeking infertility care. *Hum Reprod.* 2016 Jan;31(1):75-83. PMID: 26573529.
 76. Xia W, **Chiu Y-H**, Williams PL, Gaskins AJ, Toth TL, Tanrikut C, Hauser R & Chavarro JE. Men's meat intake and treatment outcomes among couples undergoing assisted reproduction. *Fertil Steril.* 2015 Oct;104(4):972-979. PMID: 26206344.
 77. Gaskins AJ, **Chiu Y-H**, Williams PL, Ford JB, Toth TL, Hauser R & Chavarro JE. Association between serum folate and vitamin B-12 and outcomes of assisted reproductive technologies. *Am J Clin Nutr.* 2015 Oct;102(4):943-50. PMID: 26354529.
 78. Mínguez-Alarcón L, Gaskins AJ, **Chiu Y-H**, Williams PL, Ehrlich S, Chavarro JE, Petrozza JC, Ford JB, Calafat AM & Hauser R. Urinary bisphenol A concentrations and association with in vitro fertilization outcomes among women from a fertility clinic. *Hum Reprod.* 2015 Sep;30(9):2120-8. PMID: 26209788.
 79. Mínguez-Alarcón L, Afeiche MC, **Chiu Y-H**, Vanegas JC, Williams PL, Tanrikut C,

Toth TL, Hauser R & Chavarro JE. Male soy food intake was not associated with in vitro fertilization outcomes among couples attending a fertility center. *Andrology*. 2015 Jul;3(4):702-8. PMID: 26097060.

Selected

Evaluating Prenatal Treatments: Improving Clinical Decisions Using Target Trial

Invited Talks

Emulation. Women's Health Research Lecture Series, Brown University Health. March 6, 2026.

Target Trial Emulation and Methodological Considerations for Prenatal Treatments and Offspring Outcomes. Kaiser Permanente Research & Evaluation Biostatistics Seminar. Kaiser Permanente Southern California. Nov 5, 2025.

Challenges and Future Directions of Real-World Evidence Emulated Trial Design in Cardiovascular Research. The 17th Asian Pacific Society of Atherosclerosis and Vascular Disease Congress (2025 APSAVD Congress). Taipei, Taiwan, Sept 21, 2025.

Antidiabetics in the First Trimester and Risk of Congenital Anomalies. Start, stop, switch or continue? Target trials for periconception treatment decisions among individuals taking medications to treat chronic conditions Symposium. The Society for Epidemiologic Research Annual Meeting. Boston, MA. June 11, 2025.

Target trial emulation to study long-term effects of dietary intervention. Penn State Department of Nutritional Sciences 2024-2025 Nutritional Sciences research colloquium. The Pennsylvania State University, University Park, PA, March 31, 2025.

Using the parametric g-formula to estimate survival under time-varying dietary strategies. Biostatistics, Epidemiology and Research Design seminar. Penn State Clinical and Translational Science Institute. Hershey, PA. Oct 21, 2024.

Per-protocol analysis of COSMOS trial. Novel Approaches to the Analysis of the COSMOS Trial: Beyond Intention-to-Treat Session. 11th International Conference on Polyphenols and Health. Boston, MA. Oct 17, 2024.

Estimating causal effect of food substitution. Society for Epidemiologic Research Mid-Year Meeting. Toronto, Canada. March 8, 2024.

Evaluating the effectiveness and safety of treatment strategies: a causal inference approach. Special Seminar. Center for Advanced Computing and Imaging in Biomedicine, National Taiwan University. Taipei, Taiwan. July 23, 2024

Causal inference for observational studies: emulating a target trial when randomized trials are not available. Biostatistics, Epidemiology and Research Design seminar. Penn State Clinical and Translational Science Institute. Hershey, PA. Sep 27, 2023.

Introduction to causal inference. Study Design to Inform Causal Inference in Nutrition Research Session. Nutrition 2023 Meeting. Boston, MA. July 24, 2023.

Estimating the cardiovascular effects under dietary strategies using the parametric g-formula. Smith Center for Outcomes Research in Cardiology Seminar, Beth Israel Deaconess Medical Center. Boston, MA. Jan 4, 2023

Causal Inference approaches to evaluate health effects of dynamic treatment strategies for cardiovascular health. Department of Epidemiology seminar, University of Iowa College of Public Health. Iowa City, IA. Dec 15, 2022.

Causal inference approaches to estimating the effects of dynamic strategies on cardiovascular health. Division of Intramural Research Seminar, National Institutes of Health. Bethesda, MD. Nov 3, 2022.

Causal inference approaches to evaluating the health effects of dynamic dietary strategies. Department of Epidemiology Seminar. Emory University. Atlanta, GA. April 18, 2022

Estimating the effect of nutritional interventions: the target trial approach. Massachusetts General Hospital, Clinical and Translational Epidemiology Unit (CTEU) Seminar. Boston, MA. Sept 7, 2022.

Estimating the health effects of interventions: the target trial approach. Institute of Statistical Science Special Seminar, Academia Sinica. Taipei, Taiwan. Oct 12, 2022.

Methods to handle the competing events: the effects of prenatal treatment on offspring events. Drug Safety and Causal Inference in Pregnancy Journal Club. University of North Carolina, Chapel Hill, NC. December 7, 2022.

Evaluating health effects of dynamic dietary strategies: the target trial approach. Department of Epidemiology Special Seminar. School of Public Health, University of Pittsburgh. June 4, 2021.

**Selected
Conference
Oral
Presentations**

Identification and estimation of the average causal effects under dietary substitution strategies. The Society for Epidemiologic Research Annual Meeting. Boston, MA. June 2025

Beyond the intention-to-treat: estimating the per-protocol effect of cocoa flavanol supplementation on cardiovascular events in the COSMOS trial. The Society for Clinical Trial Annual Meeting. Boston, MA. May 21, 2024

Estimating causal effect of food substitution. Causal Inference & Nutritional Epidemiology Symposium. Boston, MA. March 2024.

Metformin use in the first trimester and congenital malformation: emulating a target trial using real-world data. Advancing Perinatal Epidemiology: Approaches to Addressing Causality, Confounding, and Bias Session. The 36th Society for Pediatric and Perinatal Epidemiologic Research Meeting. Portland, OR. June 2023.

Emulating target trials for nutritional studies: confounder-adjustment methods. Bringing Nutritional Epidemiology into the era of Causal Inference Symposium. The 55th Society for Epidemiologic Research Meeting. Chicago, IL. June 2022.

Dealing with competing events in the estimation of the health effects of fertility treatment on the offspring. The 52nd Society for Epidemiologic Research Annual Meeting. Minneapolis, MN. June 2019.

Maternal Plasma Polyunsaturated Fatty Acid Concentrations during Pregnancy and Cord Blood DNA Methylation: An Epigenome-Wide Association Study. Nutrition Annual Meeting. Boston, MA. June 2018

Statistical methods for assessing chemical mixtures in environmental studies applied to prenatal phthalate mixtures and birth weight. The 50th Society for Epidemiologic Research Annual Meeting. Seattle, WA. June 2017.

Pesticide residue in fruits and vegetables and outcomes of assisted reproductive technology. The 72nd American Society for Reproductive Medicine Annual Meeting. Salt Lake City,

UT. Oct 2016.

Funded Grants *Uncovering Heterogeneity in Individual Treatment Responses via Causal Machine Learning.* NIH/NIGMS 1R35GM154888. **Role: PI.** Sept 5, 2024 - June 30, 2029
Prehospital Pediatric Ventilation Trial (PEDI-VENT). NIH/NHLBI R01HL181356.
PI: Matthew Hansen. **Role: Co-I.** September 19, 2025 - June 30, 2029.
Identifying effective dietary strategies for the prevention of preeclampsia and post-pregnancy high blood pressure. American Heart Association grant #834106. **Role: PI.** Apr 1, 2021-Mar 30, 2023.

Teaching *Graduate Instructor*
2025: Causal Inference Methods in Epidemiologic Research. PHS564. Required course for epidemiology program, Penn State College of Medicine.
Guest Lecturer
2024: Causal survival analysis. PHPH 9741: Advanced Topics in Epidemiologic Methods, Georgia State University.
Instructor or Co-Instructor for Short Courses & Workshops.
2024: *Target Trial Emulation.* Workshop at College of Public Health, National Taiwan University. Role: Instructor.
2023: *Combining information for causal inference.* Summer Courses on Causal Inference, HSPH. Role: Instructor and curriculum fellow.
2021: *Introduction to advanced causal inference methods.* Advanced Methods Workshop for Society of Pediatric and Perinatal Epidemiologic Research. Role: Co-instructor

Grant Review Scientific Reviewer, PCORI Merit Review Panel, Nov 2025
Scientific Reviewer, PCORI Merit Review Panel, Jul 2025
Scientific Reviewer, PCORI Merit Review Panel, Jul 2024
Scientific Reviewer, The Five Senses Pilot grant, Harvard Clinical and Translational Science Center, Jan 2022

Journal Review Designated Statistical Reviewer, *JAMA*, April 2024 - present
Ad-hoc Peer-Reviewer: *Diabetes Care, Epidemiology, American Journal of Epidemiology, International Journal of Epidemiology, Annals of Epidemiology, European Journal of Epidemiology, American Journal of Clinical Nutrition, Journal of Nutrition, Human Reproduction, Fertility and Sterility, BJOG, International Journal of Hygiene and Environmental Health*, 2017 - present

Leadership in Professional Societies Diversity & Inclusion Committee, Society for Epidemiologic Research (SER), 2024-2025
Co-Organizer and Co-Chair of Causal Inference Session, SER, 2024
Society of Pediatric and Perinatal Epidemiologic Research (SPER) Planning Committee, 2023

Service to Department PhD Admission Committee, Epidemiology Program, Penn State College of Medicine, 2024
Peer Review Committee for Public Health Science Courses, Penn State College of Medicine, 2024-2025
Epidemiology Curriculum Committee, Brown University School of Public Health, 2025-present
PhD Admission Committee, Brown University School of Public Health, 2025-2026