

# CURRICULUM VITAE

Michele Jonsson Funk, PhD

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## PERSONAL

Office Department of Epidemiology  
Gillings School of Global Public Health  
University of North Carolina at Chapel Hill  
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## EDUCATION

2003 **Doctor of Philosophy:**  
Epidemiology  
University of North Carolina, Chapel Hill, NC  
Dissertation: Impact of deferred highly active antiretroviral therapy on HIV  
disease progression and survival  
Advisor: James C. Thomas, PhD

2000 **Master of Science in Public Health:**  
Epidemiology  
University of North Carolina, Chapel Hill, NC  
Thesis: Epidemiology of chlamydial and gonococcal infection at a U.S.  
Army installation  
Advisor: William Miller, MD, PhD, MPH

1994 **Bachelor of Arts:**  
Psychology  
Reed College, Portland, OR  
Thesis: Addiction to stress: Opioid mediation of “learned industriousness”  
as assessed by a titration schedule  
Advisor: Dell Rhodes, PhD

## PROFESSIONAL EXPERIENCE

**Director, Center for Pharmacoepidemiology**

**Head, Pharmacoepidemiology Program**

2018 – Present Department of Epidemiology  
Gillings School of Global Public Health  
University of North Carolina at Chapel Hill

**Deputy Director**

2018 – Present  
Epidemiology Service  
(FKA Comparative Effectiveness Research [CER] Strategic Initiative)  
North Carolina Translational and Clinical Sciences (NC TraCS) Institute  
Collaborative Partnership between UNC, RTI, and NC A&T State University

**Research Associate Professor**

2015 – Present  
Department of Epidemiology  
Gillings School of Global Public Health  
University of North Carolina at Chapel Hill

**Research Assistant Professor**

2006 – 2015  
Department of Epidemiology  
Gillings School of Global Public Health  
University of North Carolina at Chapel Hill

**Director, Methods Core**

2004 – Present  
Center for Women’s Health Research  
School of Medicine  
University of North Carolina at Chapel Hill

**Research Instructor**

2004 – 2006  
Department of Epidemiology  
School of Public Health  
University of North Carolina at Chapel Hill

**Graduate Research Assistant**

1999 – 2003  
Worldwide Epidemiology  
GlaxoSmithKline  
Research Triangle Park, NC

**Graduate Research Assistant**

1998 – 1999  
Department of Epidemiology  
School of Public Health  
University of North Carolina at Chapel Hill

**Usability Specialist**

1995 – 1998  
Rhotech (Microsoft Corporation)  
Redmond, WA

**HONORS AND MEMBERSHIPS**

2018, 2019  
Nominee, University Award for the Advancement of Women,  
University of North Carolina at Chapel Hill

2018 – Present  
Director, Center for Pharmacoepidemiology (formerly known as: UNC-GSK  
Center of Excellence in Pharmacoepidemiology and Public Health),  
Department of Epidemiology, UNC Gillings School of Global Public Health.

2018 – Present  
Fellow, International Society of Pharmacoepidemiology (FISPE)

2018	Article of the Year, “Resolving an apparent paradox in doubly-robust estimators”, American Journal of Epidemiology
2018	Nominee, Harriet Hylton Barr Distinguished Alumni Award, University of North Carolina at Chapel Hill
2017 – Present	Invited Member, Epidemiology & Clinical Advisory Board (ECAB), Observational Pharmaco-Epidemiology Research & Analysis (OPERA), EpiVidian
2017 – Present	Elected Member, Board of Directors, Representing Academia Americas, International Society for Pharmacoepidemiology
2016 – Present	Invited Member, Interdisciplinary Advisory Committee (IIAC), Building Interdisciplinary Research Careers in Women’s Health (BIRCWH) Program, University of North Carolina at Chapel Hill
2016 – 2017	Past-Chair, Comparative Effectiveness Research SIG, International Society for Pharmacoepidemiology
2016	Nominee, John E Larsh Jr. Award for Mentorship, Gillings School of Global Public Health, University of North Carolina at Chapel Hill
2015 – Present	Leader, Pharmacoepidemiology Resource Laboratory, Building Interdisciplinary Research Careers in Women’s Health (BIRCWH) Program, University of North Carolina at Chapel Hill
2015 – 2016	Elected Chair, Comparative Effectiveness Research SIG, International Society for Pharmacoepidemiology
2014, 2015	Best Peer Reviews, Pharmacoepidemiology & Drug Safety
2014 – Present	Member, Education Committee, International Society for Pharmacoepidemiology
2014 – 2015	Chair-Elect, Comparative Effectiveness Research SIG, International Society for Pharmacoepidemiology
2012 – Present	Member, Comparative Effectiveness Research SIG, International Society for Pharmacoepidemiology
2010 – Present	Member, Scientific Program Committee, International Society for Pharmacoepidemiology
2008 – Present	Member, Academic Council, International Society for Pharmacoepidemiology
2005 – Present	Elected Fellow, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill
2004 – Present	Invited Member, Delta Omega, Honorary Public Health Society, Theta Chapter, University of North Carolina at Chapel Hill
2004 – Present	Member, International Society for Pharmacoepidemiology (ISPE)
2004 – 2015	Member, Society for Epidemiologic Research (SER)
2004 – 2008	Alumni Trustee, Reed College, Portland, Oregon

2004 – 2008	Member, International AIDS Society (IAS)
2002 – 2010	Honorary Research Fellow, HIV division, Medical Research Council Clinical Trials Unit, London, United Kingdom
2000 – 2002	Pre-doctoral fellowship in pharmacoepidemiology, jointly sponsored by GlaxoSmithKline and the Department of Epidemiology, University of North Carolina at Chapel Hill
2000	Young Investigator Award, American Gastroenterological Association
1998 – 1999	Graduate Merit Assistantship, Department of Epidemiology, University of North Carolina at Chapel Hill
1993, 1994	Commendation for Excellence in Scholarship, Reed College
1992, 1993	Amatai M. Brodie Memorial Scholarship, Reed College
1990 – 1994	Plano & Flora S. McCourtney Foundation Scholarship, Reed College

## PUBLICATIONS

### *Books & Chapters*

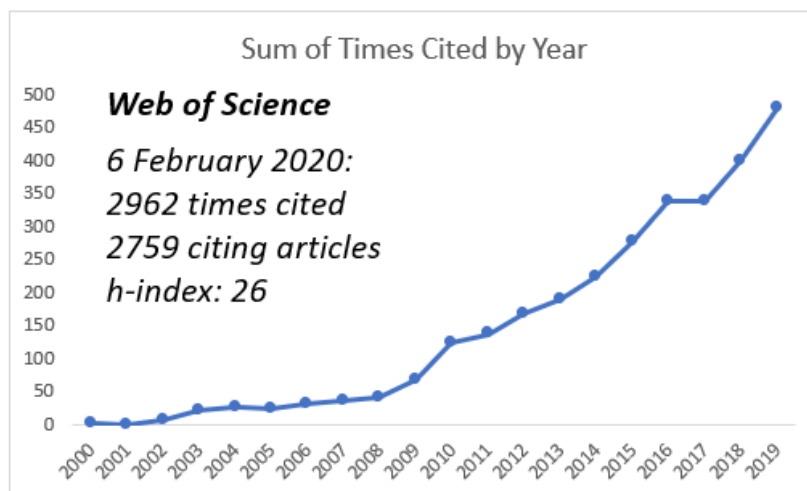
#### 2010

**Jonsson Funk M**, Westreich D, Wiesen C, Davidian M. Doubly robust estimation of treatment effects. In: Faries D, Leon AC, Haro JM, and Obenchain RL (eds.), *Analysis of Observational Health Care Data Using SAS*. SAS Press, 2010. p.85-104. ISBN-10: 1607642271 | ISBN-13: 978-1607642275.

#### 2008

Dasgupta N§, **Jonsson Funk M**, Brownstein JS. Comparing unintentional opioid poisoning mortality in metropolitan and non-metropolitan counties, United States, 1999-2003. In: Thomas YF, Richardson D, and Cheung I (eds.), *Geography and Drug Addiction*. Springer Science+Business Media B.V. 2008. p.175-192. ISBN-10: 1402085087 | ISBN-13: 978-1402085086.

### *Refereed Papers / Articles* (§ Indicates a Jonsson Funk mentee/student)



**For all publications see:** <https://www.ncbi.nlm.nih.gov/myncbi/michele.jonsson.funk.1/bibliography/public/2020> and *in press* (4)

95. Kinsey TL, Sturmer T, **Jonsson Funk M**, Poole C, Simpson RJ, Glynn RJ. Incidence of venous thromboembolism following initiation of non-steroidal anti-inflammatory drugs in U.S. women. *Rheumatology* [accepted 11/4/2019]
94. Rivera DR, Gokhale MN, Reynolds MW, Andrews EB, Chun D, Haynes K, **Jonsson-Funk ML**, Lynch KE, Lund JL, Strongman H, Bhullar H, Raman SR. Linking Electronic Health Data in Pharmacoepidemiology: Appropriateness and Feasibility. *Pharmacoepidemiol Drug Saf.* 2020 Jan;29(1):18-29.
93. § Young JC, Wu JM, Willis-Gray M, Pate V, **Jonsson Funk M**. Persistent opioid use after hysterectomy in the United States, 2005-2015. *Obstet Gynecol.* 2020 Jan;135(1):123-132.
92. Stürmer T, Wang T, Golightly YM, Keil A, Lund JL, **Jonsson Funk M**. Methodological Considerations When Analyzing and Interpreting Real-World Data. *Rheumatology*, Volume 59, Issue 1, January 2020, Pages 14–25.

2019 (8)

91. § Landi SN, Radke S, Boggess K, Engel SM, Sturmer T, Howe AS, **Jonsson Funk M**. Comparative effectiveness of metformin versus insulin for gestational diabetes in New Zealand. *Pharmacoepidemiology and Drug Safety*, 2019 Dec;28(12):1609-1619.doi: 10.1002/pds.4907.
90. Htoo PT, Simpson RJ, Sturmer T, **Jonsson Funk M**, Pate V, Lund JL. Renin-Angiotensin-Aldosterone System-Based Antihypertensive Agents and the Risk of Colorectal Cancer Among Medicare Beneficiaries. *Epidemiology* 2019 Nov;30(6):867-875. doi: 10.1097/EDE.0000000000001065.
89. § Young JC, Dasgupta N, Chidgey BA, **Jonsson Funk M**. Postsurgical opioid prescriptions and risk of long-term use. *Annals of Surgery* 2019 Aug 9. doi: 10.1097/SLA.0000000000003549. [Epub ahead of print]
88. § Young JC, **Jonsson Funk M**, Dasgupta N. Medical Use of Long-term Extended-release Opioid Analgesics in Commercially Insured Adults in the United States. *Pain Medicine* 2019 Jul 24. pii: pnz155. doi: 10.1093/pm/pnz155. [Epub ahead of print]
87. Mayer SE, Tan HJ, Peacock Hinton S, Hester LL, Stürmer T, Faurot KR, **Jonsson Funk M**, Sanoff HK, Lund JL. Comparison of Medicare claims-based measures of poor physical function and associations with treatment receipt and mortality in older colon cancer patients. *Med Care.* 2019 Apr;57(4):286-294.
86. § Landi SN, Radke S, Engel SM, Boggess K, Stürmer T, Howe AS, **Funk MJ**. Association of Long-term Child Growth and Developmental Outcomes With Metformin vs Insulin Treatment for Gestational Diabetes. *JAMA Pediatr.* 2019 Feb 1;173(2):160-168.

85. Hong JL, Webster-Clark M, **Jonsson Funk M**, Sturmer T, Dempster S, Cole SR, Herr I, LoCasale R. Comparison of Methods to Generalize Randomized Clinical Trial Results without Individual-Level Data for the Target Population. *Am J Epidemiol*. 2019 Feb 1;188(2):426-437.
84. § Young J, Lund J, Dasgupta N, **Jonsson Funk M**. Opioid Tolerance and Clinically Recognized Opioid Poisoning among Patients Prescribed Extended-Release Long-Acting Opioids. *Pharmacoepidemiol Drug Saf*. 2019 Jan;28(1):39-47.

#### 2018 (12)

83. § Young JC, Conover MM, **Jonsson Funk M**. Measurement error and misclassification in electronic medical records: methods to mitigate bias. *Current Epidemiology Reports* December 2018, Volume 5, Issue 4, pp 343–356.
82. § Gruber JF, Becker-Dreps S, Hudgens MG, Brookhart MA, Thomas JC, **Jonsson Funk M**. Timing of Rotavirus Vaccine Doses and Incidence of Severe Rotavirus Gastroenteritis among Vaccinated Infants in Low- and Middle-Income Countries. *Epidemiology*. 2018 Nov;29(6):867-875.
81. Gokhale M, Buse J, Mack C, **Jonsson Funk M**, Lund J, Simpson R, Stürmer T. Calendar time as an instrumental variable in assessing the risk of heart failure with antihyperglycemic drugs. *Pharmacoepidemiol Drug Saf*. 2018 Aug;27(8):857-866.
80. § Conover MM, Sturmer T, Poole C, Glynn RJ, Simpson RJ, Pate V, **Jonsson Funk M**. Classifying medical histories in U.S. Medicare beneficiaries using fixed vs. all-available look-back approaches. *Pharmacoepidemiol Drug Saf*. 2018 Jul;27(7):771-780.
79. Cuthbertson CC, Kucharska-Newton A, Faurot KR, Sturmer T, **Jonsson Funk M**, Palta P, Windham BW, Thai S, Lund JL. Controlling for frailty in pharmacoepidemiologic and comparative effectiveness studies of older adults: Validation of an existing Medicare claims-based algorithm. *Epidemiology*. 2018 Jul;29(4):556-561.
78. Hong JL, Buse JB, **Jonsson Funk M**, Pate V, Sturmer T. The risk of acute pancreatitis after initiation of dipeptidyl peptidase-4 inhibitors: testing a hypothesis of subgroup differences in older US adults. *Diabetes Care*. 2018 Jun;41(6):1196-1203. [[Top 1% of papers in Clinical Medicine as of Sept/Oct 2019; 52 citations](#)]
77. Keil AP, Mooney S, **Jonsson Funk M**, Cole SR, Edwards JK, Westreich D. Resolving an apparent paradox in doubly-robust estimators. *Am J Epidemiol*. 2018 Apr 1;187(4):891-892.  
  
*\*AJE Article of the Year (one of ten)*
76. § Gruber JF, Becker-Dreps S, Hudgens MG, Brookhart MA, Thomas JC, **Jonsson Funk M**. Timing and Predictors of Severe Rotavirus Gastroenteritis among Unvaccinated Infants in Low- and Middle-Income Countries. *Epidemiol Infect*. 2018 Apr;146(6):698-704.
75. § Suarez EA, Landi SN, Conover MC, **Jonsson Funk M**. Bias from Restricting to Live Births when Estimating Effects of Prescription Drug Use on Pregnancy Complications: A Simulation. *Pharmacoepidemiol Drug Saf*. 2018 Mar;27(3):307-314.

74. § Kinlaw AC, **Jonsson Funk M**, Conover MM, Pate V, Markland AD, Wu JM. Impact of New Medications and \$4 Generic Programs on Overactive Bladder Treatment among Older Adults in the United States, 2000-2015. *Med Care*. 2018 Feb;56(2):162-170. doi: 10.1097/MLR.0000000000000858.
73. Dehmer EW, Phadnis MA, Gunderson CE, Bibbins-Domingo K, Engel SM, **Jonsson Funk M**, Kramer H, Kshirsagar AV, Heiss G. The association between gestational diabetes and incident maternal chronic kidney disease: the CARDIA study. *Am J Kidney Dis*. 2018 Jan;71(1):112-122. doi: 10.1053/j.ajkd.2017.08.015. Epub 2017 Nov 8.
72. Hong JL, **Jonsson Funk M**, LoCasale R, Dempster S, Cole SR, Webster-Clark M, Edwards J, Sturmer T. Generalizing randomized clinical trial results: Implementation and challenges related to missing data in the target population. *Am J Epidemiol*. 2017 Aug 10. doi: 10.1093/aje/kwx287. [Epub ahead of print].

#### 2017 (8)

71. Todd JV, Cole SR, Wohl DA, Simpson R, **Jonsson Funk M**, Brookhart MA, Cocohoba J, Merenstein D, Sharma A, Lazar J, Milam J, Cohen M, Gange S, Lewis T, Burkholder G, Adimora AA. Underutilization of statins when indicated in HIV-seropositive and seronegative women in the Women's Interagency HIV Study. *AIDS Patient Care STDS*. 2017 Nov;31(11):447-454. doi: 10.1089/apc.2017.0145.
70. Hartmann KE, Velez Edwards DR, Savitz DA, **Jonsson-Funk ML**, Wu P, Sundermann AC, Baird DD. Prospective cohort study of uterine fibroids and miscarriage risk. *Am J Epidemiol*. 2017 Nov 15;186(10):1140-1148. doi: 10.1093/aje/kwx062.
69. Gokhale MN, Buse J, **Jonsson Funk M**, Lund J, Pate V, Simpson R, Sturmer T. No increased risk of cardiovascular events in older adults initiating dipeptidyl peptidase 4 inhibitors versus therapeutic alternatives. *Diabetes Obes Metab*. 2017 Jul;19(7):970-978. doi: 10.1111/dom.12906. Epub 2017 Mar 17.
68. Wu JM, Dieter AA, Pate V, **Jonsson Funk M**. Cumulative Incidence of a Subsequent Surgery After Stress Incontinence and Pelvic Organ Prolapse Procedure. *Obstet Gynecol*. 2017 Jun;129(6):1124-1130. doi: 10.1097/AOG.0000000000002051.
67. Hong JL, Henderson LM, **Jonsson Funk M**, Lund JL, Buse J, Pate V, Sturmer T. Differential use of screening mammography in older women initiating metformin versus sulfonylureas. *Pharmacoepidemiol Drug Saf*. 2017 Jun;26(6):666-675. doi: 10.1002/pds.4195. Epub 2017 Mar 29.
66. Hong JL, **Jonsson Funk M**, Buse J, Henderson LM, Lund JL, Pate V, Sturmer T. Comparative effect of initiating metformin versus sulfonylureas on breast cancer risk in older women. *Epidemiology*. 2017 May;28(3):446-454. doi: 10.1097/EDE.0000000000000635.
65. § Gruber JF, Gruber LM, Weber RP, Becker-Dreps S, **Jonsson Funk M**. Rotavirus vaccine schedules and vaccine response among infants in low- and middle-income countries: a systematic review. *Open Forum Infect Dis*. 2017 Apr 5;4(2):ofx066. doi: 10.1093/ofid/ofx066. eCollection 2017 Spring. Review.

64. § Kinlaw AC, **Jonsson Funk M**, Steiner MJ, Conover MM, Pate V, Wu JM. Trends in pharmacotherapy for bladder dysfunction among children in the United States, 2000 to 2013. *Clin Pediatr (Phila)*. 2016 Apr 13 pii: 0009922816641366. [Epub ahead of print] NIHMSID: NIHMS777847.

#### 2016 (4)

63. § Young JC, Stürmer T, Lund JL, **Jonsson Funk M**. Predictors of prevalent statin use among older adults identified as statin initiators based on Medicare claims data. *Pharmacoepidemiol Drug Saf*. 2016 Jul;25(7):836-43. doi: 10.1002/pds.3991. Epub 2016 Mar 15. NIHMSID: NIHMS767738.
62. Gokhale M, Girman C, Chen Y, Pate V, **Jonsson Funk M**, Stürmer T. Comparison of diagnostic evaluations for cough among initiators of angiotensin converting enzyme inhibitors and angiotensin receptor blockers. *Pharmacoepidemiol Drug Saf*. 2016 May;25(5):512-20. doi: 10.1002/pds.3977. Epub 2016 Feb 10. PubMed PMCID: PMC4933308.
61. Jiron M, Pate V, Hanson LC, Lund JL, **Jonsson Funk M**, Stürmer T. Trends in prevalence and determinants of potentially inappropriate prescribing in the United States: 2007 to 2012. *J Am Geriatr Soc*. 2016 Apr;64(4):788-97. doi: 10.1111/jgs.14077. PMCID: PMC4843827
60. Dasgupta N, **Jonsson Funk M**, Proescholdbell S, Hirsch A, Ribisl KM, Marshall S. Cohort study of the impact of high-dose opioid analgesics on overdose mortality. 2016 Jan;17(1):85-98. Erratum in: *Pain Med*. 2016 Apr;17(4):797-8. [*Top 1% of papers in Clinical Medicine as of Sept/Oct 2019; 99 citations*]

#### 2015 (7)

59. § Conover MM, **Jonsson Funk M**, Kinlaw AC, Borawski KM, Wu JM. Trends and Patterns of Urodynamic Studies in U.S. Males, 2000-2012. *PLOS ONE*, 2015 July;10(7):1-9. PMCID: PMC4511189
58. Wyss R, Ellis AR, Brookhart MA, **Jonsson Funk M**, Girman CJ, Simpson RJ Jr, Stürmer T. Matching on the disease risk score in comparative effectiveness research of new treatments. *Pharmacoepidemiol Drug Saf*. 2015 Sep;24(9):951-61. doi: 10.1002/pds.3810. Epub 2015 Jun 25. PMCID: PMC4833391
57. § Conover MM, Howell JO, Wu JM, Kinlaw AC, Dasgupta N, **Jonsson Funk M**. Incidence of opioid-managed pelvic pain after sterilization by implanted device versus laparoscopic tubal ligation, US 2005-2012. *Pharmacoepidemiol Drug Saf*. 2015 Aug;24(8):875-84. doi: 10.1002/pds.3766. Epub 2015 Mar 31. PMCID: PMC4527877
56. § Camelo Castillo W, Boggess K, Stürmer T, Brookhart MA, Benjamin DK Jr, **Jonsson Funk M**. Association of Adverse Pregnancy Outcomes With Glyburide vs Insulin in Women With Gestational Diabetes. *JAMA Pediatrics* 2015 May 1;169(5):452-8. doi: 10.1001/jamapediatrics.2015.74.
55. § Conover MM, **Jonsson Funk M**, Kinlaw AC, Connolly A, Wu JM. Trends and Patterns of Urodynamic Studies in U.S. Women, 2000–2012. *Obstet Gynecol*, 2015 Mar;125(3):559-65. doi: 10.1097/AOG.0000000000000641. PMCID: PMC4347991

*\*Required for Maintenance of Certification for all Board Certified Obstetrician/Gynecologists in 2015*



54. § Ko EM, Stürmer T, Hong JL, Castillo WC, Bae-Jump V, **Jonsson Funk M**. Metformin and the risk of endometrial cancer: a population-based cohort study. *Gynecol Oncol*. 2015 Feb;136(2):341-7. doi: 10.1016/j.ygyno.2014.12.001. Epub 2014 Dec 8. PubMed PMID: 25499603.
53. Faurot KR, **Jonsson Funk M**, Pate V, Brookhart MA, Patrick A, Hanson LC, Camelo Castillo W, Stürmer T. Using Claims Data to Predict Dependency in Activities of Daily Living as a Proxy for Frailty. *Pharmacoepi Drug Safety* 2015 Jan;24(1):59-66. doi: 10.1002/pds.3719. Epub 2014 Oct 21. PMCID: PMC4293227

#### 2014 (9)

52. **Jonsson Funk M**, Landi SN. Misclassification in administrative claims data: quantifying the impact on treatment effect estimates. *Curr Epidemiol Rep* (2014) 1:175-185. PMCID: PMC4465810
51. Wyss R, Ellis AR, Brookhart MA, Girman CJ, **Jonsson Funk M**, LoCasale R, Sturmer T. The Role of Prediction Modeling in Propensity Score Estimation: An Evaluation of Logistic Regression, bCART, and the Covariate Balancing Propensity Score. *Am J Epid* 2014 Sep 15;180(6):645-55. [PMCID: PMC4157700]
50. § Li X, Camelo Castillo W, Stürmer T, Pate V, Gray CL, Simpson RJ, Setoguchi S, Hanson LC, **Jonsson Funk M**. Use of Combination Antihypertensive Therapy Initiation in Older Americans without Prevalent Cardiovascular Disease. *J Am Geriatr Soc* 2014 Sep;62(9):1729-35. [PMCID: PMC4172499]
49. Giri A, Edwards T, LeGrys V, Lorenz C, **Funk MJ**, Schectman R, Heiss G, Robinson J, Hartmann KE. Subclinical Hypothyroidism and Risk for Incident Ischemic Stroke among Postmenopausal Women. *Thyroid* 2014 Aug;24(8):1210-1217. [PMCID: PMC4106389]
48. § Berggren EK, Boggess K, **Jonsson Funk M**. Population health: Modest glycemic improvements in a pregnant cohort with mild glucose intolerance decreased adverse outcomes. *Paediatr Perinat Epid* 2014 Jul;28(4):280-6. PMCID: PMC4701214
47. Wu JM, Mathews C, Conover M, Pate V, **Jonsson Funk M**. Lifetime risk of prolapse or incontinence surgery in a population-based cohort. *Obstet Gynecol* 2014 Jun;123(6):1201-6. [PMCID: PMC4174312] [*Top 1% of papers in Clinical Medicine as of Sept/Oct 2019; 331 citations*]  
*\*2014 Roy M. Pitkin Award, American College of Obstetrics and Gynecology*
46. § Camelo Castillo W, Boggess K, Sturmer T, Brookhart MA, Benjamin DK Jr, **Jonsson Funk M**. Trends in glyburide versus insulin use for gestational diabetes treatment in the U.S., 2000-2011. *Obstet Gynecol* 2014 Jun;123(6):1177-84. [PMCID: PMC4075168]  
*\*Required for Maintenance of Certification for all Board Certified Obstetrician/Gynecologists in 2014*
45. Watkins S, **Jonsson-Funk M**, Brookhart MA, Rosenberg SA, O'Shea TM, Daniels J. Preschool motor skills following physical and occupational therapy services among non-disabled very low birth weight children. *Matern Child Health J* 2014 May;18(4):821-8. [PMID: 23820671]
44. Panozzo CA, Becker-Dreps S, Pate V, Weber DJ, **Jonsson Funk M**, Stürmer T, Brookhart MA. Direct, indirect, total, and overall effectiveness of the rotavirus vaccines in preventing gastroenteritis

hospitalizations in privately-insured US children, 2007-2010. Am J Epidemiol 2014 Apr;179(7):895-909. [PMCID: PMC3969536]

### 2013 (10)

43. Layton JB, Brookhart MA, **Jonsson Funk M**, Simpson RJ, Pate V, Stürmer T, Kshirsagar AV. Acute kidney injury in statin initiators. Pharmacoepidemiol Drug Saf 2013 Oct;22(10):1061-70. [PMCID: PMC3822439]
42. Watkins S, **Jonsson-Funk M**, Brookhart MA, Rosenberg S, O'Shea M, Daniels J. An empirical comparison of tree-based methods for propensity score estimation. Health Serv Res 2013 Oct;48(5):1798-817. [PMID: 23701015]
41. Panozzo CA, Becker-Dreps S, Pate V, **Jonsson Funk M**, Stürmer T, Weber DJ, Brookhart MA. Patterns of rotavirus vaccine uptake and use in privately-insured US infants, 2006-2010. PLOS One 2013 Sep 16;8(9):e73825. [PMCID: PMC3774785]
40. **Jonsson Funk M**, Visco AG, Weidner AC, Pate V, Wu JM. Long-term outcomes of vaginal mesh versus native tissue repair for anterior vaginal wall prolapse. Int Urogynecol J 2013 Aug;24(8):1279-85. [PMCID: PMC3894057]
39. Dasgupta N, Proescholdbell S, Sanford C, **Funk MJ**, Casteel C, Ribisl KM, Marshall S. Defining Controlled Substances Overdose: Should Deaths from Substance use Disorders and Pharmaceutical Adverse Events be included? J Clin Toxicol 3:164.doi:10.4172/2161-0495.1000164
38. LeGrys VA, **Funk MJ**, Lorenz CE, Giri A, Jackson RD, Manson JE, Schectman R, Edwards TL, Heiss G, Hartmann KE. Subclinical Hypothyroidism and Risk for Incident Myocardial Infarction among Postmenopausal Women. J Clin Endocrinol Metab 2013 Jun;98(6):2308-17. [PMCID: PMC3667262]
37. § Ko E, **Funk MJ**, Clark LH, Brewster WR. Did GOG99 and PORTEC1 Change Clinical Practice in the United States? Gynecol Oncol 2013 Apr;129(1):12-7. [PMID: 23376807]  
*\*Required for Maintenance of Certification for all Board Certified Obstetrician/Gynecologists in 2013*
36. Layton JB, Kshirsagar AV, Simpson RJ Jr, Pate V, **Jonsson Funk M**, Stürmer T, Brookhart MA. Effect of Statin Use on Acute Kidney Injury Risk Following Coronary Artery Bypass Grafting. Am J Cardiol 2013 Mar 15;111(6):823-8. [PMCID: PMC3637989]
35. **Jonsson Funk M**, Siddiqui NY, Pate V, Amundsen CA, Wu JM. Sling Revision/Removal for Mesh Erosion and Urinary Retention: Long-term Risk and Predictors. Am J Obstet Gynecol 2013 Jan;208(1):73.e1-7. [PMCID: PMC3529743] [*Editor's Choice*]
34. **Jonsson Funk M**, Edenfield AL, Pate V, Visco AG, Weidner AC, Wu JM. Trends in use of surgical mesh for pelvic organ prolapse. Am J Obstet Gynecol 2013 Jan;208(1):79.e1-7. [PMCID: PMC3529857] [*Editor's Choice*]

### 2012 (6)

33. Edwards DR, Aldridge T, Baird DD, **Funk MJ**, Savitz DA, Hartmann KE. Periconceptional over-the-counter nonsteroidal anti-inflammatory drug exposure and risk for spontaneous abortion. *Obstet Gynecol* 2012 Jul;120(1):113-122.[PMCID: PMC342753]
32. **Jonsson Funk M**, Siddiqui NY, Kawasaki A, Wu JM. Long-term outcomes after stress urinary incontinence surgery. *Obstet Gynecol*. 2012 Jul;120(1):83-90. [PMCID: PMC3508030]
31. § Dasgupta N, Davis J, **Jonsson Funk M**, Dart RC. Using Poison Center Exposure Calls to Predict Methadone Poisoning Deaths. *PLoS ONE* 2012;7(7):e41181.[PMCID: PMC3400615]
30. § Berggren EK, Boggess KA, **Funk MJ**, Stuebe AM. Racial disparities in perinatal outcomes among women with gestational diabetes. *J Womens Health* 2012 May;21(5):521-7 [PMCID: PMC3353823]
29. **Jonsson Funk M**, Levin PJ, Wu JM. Trends in the surgical management of stress urinary incontinence. *Obstet Gynecol* 2012 Apr;119(4):845-51. [PMCID: PMC3310349]
28. Van Dole KB, DeVellis RF, Brown RD, **Funk ML**, Gaynes BN, Williams RE. Evaluation of the Menopause-Specific Quality of Life Questionnaire: A Factor-Analytic Approach. *Menopause* 2012 Feb;19(2):211-5.

#### 2011 (5)

27. § Berggren EK, Boggess KA, Stuebe AM, **Jonsson Funk M**. National Diabetes Data Group vs Carpenter-Coustan criteria to diagnose gestational diabetes. *Am J Obstet Gynecol* 2011 Sept;205(3):253.e1-e7. [PMCID: PMC3670957]
26. **Jonsson Funk M**, Fusco JS, Cole SR, Thomas JC, Porter K, Kaufman JS, Davidian M, White AD, Hartmann KE, Eron JJ, on behalf of Writing Committee for the CASCADE Collaboration. Timing of HAART Initiation and Clinical Outcomes in Human Immunodeficiency Virus Type 1 Seroconverters. *Arch Intern Med* 2011 Sept;171(17):1560-1569. [PMCID: PMC3960856]
25. Stürmer T, **Jonsson Funk M**, Poole C, Brookhart MA. Nonexperimental Comparative Effectiveness Research Using Linked Healthcare Databases. *Epidemiology* 2011 May;22(3):298-301. [PMCID: PMC4012640]
24. **Funk MJ**, Westreich D, Wiesen C, Stürmer T, Brookhart MA, Davidian M. Doubly robust estimation of causal effects. *Am J Epidemiol* 2011 Apr;173(7):761-7. [PMCID: PMC3070495] *[Top 1% of papers in Social Sciences as of Sept/Oct 2019; 165 citations]*
23. Westreich D, Cole SR, **Funk MJ**, Brookhart MA, Stürmer T. The role of the c-statistic in variable selection for propensity score models. *Pharmacoepidemiol Drug Saf* 2011 Mar;20(3):317-20. [PMCID: PMC3081361]

#### 2010 (5)

22. § Van Dole KB, Williams RE, Brown RS, Gaynes B, DeVellis R, **Funk MJ**. Longitudinal association of vasomotor symptoms and psychosocial outcomes among postmenopausal women in the United States: a population-based study. *Menopause* 2010 Sep-Oct;17(5):917-23.

21. § Westreich D, Lessler J, **Funk MJ**. Propensity score estimation: neural networks, support vector machines, decision trees (CART), and meta-classifiers as alternatives to logistic regression. *J Clin Epidemiol* 2010 Aug;63(8):826-33. [PMCID: PMC2907172] [[138 citations](#)]
20. Hasan R, Baird DD, Herring AH, Olshan AF, **Jonsson Funk ML**, Hartmann KE. Patterns and predictors of vaginal bleeding in the first trimester of pregnancy. *Ann Epidemiol* 2010 Jul;20(7):524-31. [PMCID: PMC2884141]
19. Westreich D, Cole SR, Tien PC, Chmiel JS, Kingley L, **Funk MJ**, Anastos K, Jacobson LP. Time scale and adjusted survival curves for marginal structural cox models. *Am J Epidemiol* 2010 Mar;171(6):691-700. [PMCID: PMC2877453]
18. Hasan R, **Funk ML**, Herring AH, Olshan AF, Hartmann KE, Baird DD. Accuracy of reporting bleeding during pregnancy. *Paediatr and Perinat Epid* 2010 Jan;24(1):31-4. [PMCID: PMC2828393]

#### 2009 (4)

17. Hasan R, Baird DD, Herring AH, Olshan AF, **Jonsson Funk ML**, Hartmann KE. Association between first-trimester vaginal bleeding and miscarriage. *Obstet Gynecol* 2009 Oct;114(4):860-867. [PMCID: PMC2828396]
16. Sterne JAC, May M, Costagliola D, de Wolf F, Phillips AN, Harris R, **Funk MJ**, Geskus RB, Gill J, Davis F, Miro JM, Justice AC, Ledergerber B, Fatkenheuer G, Hogg RS, D'Arminio Monforte A, Saag M, Smith C, Staszewski S, Egger M, Cole SR, for the When to Start Consortium. Timing of initiation of antiretroviral therapy in AIDS-free HIV-1-infected patients: a collaborative analysis of 18 HIV cohort studies. *Lancet* 2009 Apr;373(9672):1352-63. [PMCID: PMC2670965] [[Top 1% of papers in Clinical Medicine as of Sept/Oct 2019; 523 citations](#)]
15. Westreich DJ, Sanne I, Maskew M, Malope-Kgokong M, Conradie F, Majuba P, **Funk MJ**, Kaufman JS, Van Rie A, MacPhail P. Tuberculosis treatment and risk of stavudine substitution in first-line antiretroviral therapy. *Clin Infect Dis* 2009 Jun;48(11):1617-23. [PMCID: PMC2787193]
14. § Stegmann BJ, **Funk MJ**, Sinaii N, Hartmann KE, Segers J, Niemann LK, Stratton P. A Logistic Model for the Prediction of Endometriosis. *Fertil Steril* 2009 Jan;91(1):51-5. [PMCID: PMC2629050]

#### 2008 (2)

13. Allen LA, Yager JE, **Funk MJ**, Levy WC, Tulskey JA, Bowers MT, Dodson GC, O'Connor CM, Felker GM. Discordance between patient-predicted and model-predicted life expectancy among ambulatory heart failure patients. *JAMA* 2008 Jun;299(21):2533-42. [PMCID: PMC3623529] [[142 citations](#)]
12. Cunnington M, Webb D, Quizilbash N, Blum D, Mander A, **Funk MJ**, Weil J. Risk of Ischaemic Cardiovascular Events from Selective Cyclooxygenase-2 Inhibitors in Osteoarthritis. *Pharmacoepidemiol Drug Saf* 2008 Jun;17(6):601-8.

2007 (2)

11. **Funk MJ**, Belinson SE, Pimenta JM, Morsheimer M, Gibbons DC. Mitochondrial disorders among infants exposed to HIV and antiretroviral therapy. *Drug Saf* 2007;30(10):845-59.
10. Westin SN, Skinner EN, **Jonsson Funk M**, Gehrig PM, Van Le L. Incidence of symptomatic deep venous thrombosis with epoetin alfa or darbepoetin alfa treatment of anemia in patients with ovarian or primary peritoneal cancer. *Gynecol Oncol* 2007 May;105(2):414-7.

2006 (2)

9. Viswanathan M, Visco AG, Hartmann K, Wechter ME, Gartlehner G, Wu JM, Palmieri R, **Funk MJ**, Lux L, Swinson T, Lohr KN. Cesarean delivery on maternal request. *Evid Rep Technol Assess (Full Rep)* 2006 Mar;(133):1-138. PMID: PMC4781381
8. Visco AG, Viswanathan M, Lohr KN, Wechter ME, Gartlehner G, Wu JM, Palmieri R, **Funk MJ**, Lux L, Swinson T, Hartmann KE. Cesarean Delivery on Maternal Request: A Systematic Evidence Review. *Obstet Gynecol* 2006;108(6):1517-29.

2005 (2)

7. Lamvu G, Lorenz C, **Jonsson Funk M**, Makarushka C, Hartmann K, Savitz D. Racial differences among reasons for participating in research of pregnancy outcomes: the Right from the Start experience. *Gender Med* 2005;2:166-173.
6. Hann HW, **Jonsson Funk ML**, Rosenberg DM, Davis R. Factors associated with response to lamivudine: Retrospective study in a tertiary care clinic serving patients with chronic hepatitis B. *J Gastroenterol Hepatol* 2005 Mar;20(3):433-40.

2002 (3)

5. Pascual A, Cachafeiro A, **Funk ML**, Fiscus SA. Comparison of an assay using signal amplification of the heat-dissociated p24 antigen with the Roche Monitor human immunodeficiency virus RNA assay. *J Clin Microbiol* 2002;40(7):2472-5. [PMCID: PMC120606]
4. Fiscus SA, Adimora AA, **Funk ML**, Schoenbach VJ, Tristram D, Lim W, McKinney R, Rupar D, Woods C, Wilfert C. Trends in interventions to reduce perinatal human immunodeficiency virus type 1 transmission in North Carolina. *Pediatr Infect Dis J* 2002 Jul;21(7):664-8.
3. **Funk ML**, Rosenberg DM, Lok AS. World-wide epidemiology of HBeAg-negative chronic hepatitis B and associated precore and core promoter variants. *J Viral Hepat* 2002 Jan;9(1):52-61.

1996 (1)

2. **Funk M**, Saldana L, Peterson L. A basic internet primer for behavior therapists: Part I. Cognitive and Behavioral Practice 1996; 3(1):127-135.

1994 (1)

1. Evans MJ, Duvel A, **Funk ML**, Lehman B, Sparrow J, Watson NT, Neuringer A. Social reinforcement of operant behavior in rats: a methodological note. *J Exp Anal Behav* 1994 Jul;62(1):149-56. [PMCID: PMC1334372]

***Invited Commentaries***

**Funk MJ**, LeGrys VA. Testing diagnostic tests: why size matters. *J Pediatr* (2005) Feb;146(2):159-62.

***Letters***

1. Castillo, W. C. and **M. J. Funk** (2015). "Glyburide vs Insulin and Adverse Pregnancy Outcomes--Reply." *JAMA Pediatr* 169(10): 975.
2. Hartmann, K. E., et al. (2018). "THE AUTHORS REPLY." *Am J Epidemiol* 187(5): 1133-1134.

**Refereed Unpublished Oral Presentations & Abstracts**

*\* Dissertations*

2003 (1)

1. **Jonsson Funk M**. Impact of deferred highly active antiretroviral therapy on HIV disease progression and survival. PhD Dissertation, Department of Epidemiology, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, USA.

*\*Abstracts (work not published; § Jonsson Funk mentee and lead)*

1. § Conover MM, Pate V, **Jonsson Funk M**. Modeling Effect Heterogeneity in the Presence of Heterogeneous Confounding: A Plasmode Simulation. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):16. DOI: 10.1002/pds.4864 [Abstract]
2. § Conover MM, Pate V, **Jonsson Funk M**. Residual Confounding and Treatment Effect Heterogeneity: An applied example. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):18. DOI: 10.1002/pds.4864 [Abstract]
3. § Suarez L, Boggess K, Engel SM, Lund JL, Stürmer T, **Jonsson Funk M**. Ondansetron use in early pregnancy and miscarriage. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):33. DOI: 10.1002/pds.4864 [Abstract]
4. § Young JC, Chidgey BA, Stürmer T, **Jonsson Funk M**. The proportion of patients in the United States receiving postsurgical opioids exceeding recommended thresholds increased between 2006 and 2015. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):212. DOI: 10.1002/pds.4864 [Abstract]

5. § Young JC, Pate V, Wu JM, **Jonsson Funk M**. Estimates of prolonged opioid use following surgery vary by orders of magnitude across various definitions. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):231. DOI: 10.1002/pds.4864 [Abstract]
6. § Dejene S, Wu JM, Pate V, **Jonsson-Funk M**. Long-term outcomes following mid-urethral mesh sling surgery for stress urinary incontinence. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):255. DOI: 10.1002/pds.4864 [Abstract]
7. § Suarez L, Boggess K, Engel SM, Lund JL, Stürmer T, **Jonsson Funk M**. Ondansetron use in early pregnancy and late pregnancy outcomes. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):435. DOI: 10.1002/pds.4864 [Abstract]
8. **Jonsson Funk M**, Conover MM, Pate V. Real-world evidence of statin effectiveness in older adults. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):285. DOI: 10.1002/pds.4864 [Abstract]
9. Webster-Clark M, Conover MM, **Jonsson-Funk M**, Stürmer T. Can Adjustment Fail? Confounder Misclassification in Single-Arm Studies with Real World Comparators. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):28. DOI: 10.1002/pds.4864 [Abstract]
10. D’Arcy M, Stürmer T, **Jonsson Funk M**. Detection of Prevalent Cancer among New Users without Routine Care. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):43. DOI: 10.1002/pds.4864 [Abstract]
11. Ross RK, Kuo T-M, **Jonsson Funk M**, Lund JL. Validation of a five-year mortality prediction model among US Medicare beneficiaries. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):226. DOI: 10.1002/pds.4864 [Abstract]
12. Kinsey T, Stürmer T, **Jonsson Funk M**, Poole C, Simpson RJ Jr, Glynn RJ. Analytic and design approaches to unmeasured confounding by body mass index. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):309. DOI: 10.1002/pds.4864 [Abstract]
13. Webster-Clark M, Westreich D, Baron JA, **Jonsson-Funk M**. Missing the trees for the forest plots: Where subgroups fall short. *Pharmacoepidem Dr S*. 2019; **28**(S2):311. DOI: 10.1002/pds.4864 [Abstract]
14. Wang T, Assimon MM, Pate V, Gower EW, Lund JL, **Jonsson-Funk ML**, Buse JB, Stürmer T. Bias reduction with multiple imputation of lab results from a limited internal sample. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):313. DOI: 10.1002/pds.4864 [Abstract]
15. Htoo PT, **Jonsson-Funk M**, Fang G, Pate V, Buse J, Edwards JK, Dasgupta N, Stürmer T. Comparative performance of trend-in-trend design and instrumental variable methods in an active comparator new user setting. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):404. DOI: 10.1002/pds.4864 [Abstract]
16. Hsu CD, Peacock Hinton S, Stürmer T, **Jonsson Funk M**, Reeder-Hayes KE, Sanoff HK, Lund JL. Association between concomitant hydrochlorothiazide and cyclophosphamide use, and

chemotherapy regimen discontinuation in breast cancer patients. *Pharmacoepidemiology Drug Safety*. 2019; **28**(S2):444. DOI: 10.1002/pds.4864 [Abstract]

## Other Unrefereed Works

### *Invited Oral Presentations*

#### National

- 2020        **Validation studies and data linkages**, Use of External Data in Pharmacoepidemiology, International Society of Pharmacoepidemiology, MidYear Meeting, Orlando Florida, April 21, 2020
- 2019        **Tailoring the Strength of Evidence in RWE**, Real World Evidence (RWE) Engagement Meeting, UCB, Atlanta, Georgia, October 1, 2019
- 2019        **Intermediate Pharmacoepidemiology**. Course developer and Lead Faculty, Pre-Conference Educational Session, 35th Annual meeting of the International Society for Pharmacoepidemiology & Public Health, Philadelphia, USA, August 2019.
- 2019        **Estimating treatment effects without randomization: Historical controls**, Takeda, Boston MA, January 15, 2019.
- 2019        **Comparison and contrasting common data models**, Real World Evidence (RWE) Practice Team, UCB, Research Triangle Park, NC, September 24, 2019.
- 2019        **Generalizability versus Transportability**, Real World Evidence (RWE) Practice Team, UCB, Research Triangle Park, NC, June 11, 2019.
- 2018        **Role of machine learning in generating Real World Evidence**, UCB, Research Triangle Park, NC, Dec 4, 2018.
- 2018        **Measurement Error and Misclassification in Electronic Medical Records: Methods to Mitigate Bias**. UCB, Research Triangle Park, NC, August 28, 2018
- 2018        **Linking Electronic Health Data in Pharmacoepidemiology: Appropriateness and Feasibility**, UCB, Research Triangle Park, NC, May 22, 2018
- 2017        **Randomized Clinical Trials vs Real World Evidence Studies**, Advanced Real World Evidence, UCB, Research Triangle Park, NC, November 3, 2017.
- 2017        **Sources of Data for Pharmacoepidemiology**, Advanced Real-World Evidence, UCB, Research Triangle Park, NC, November 3, 2017.
- 2017        **Choosing the Right Study Design**, Advanced Real-World Evidence, UCB, Research Triangle Park, NC, November 3, 2017.
- 2017        **Opportunities and Challenges of machine learning approaches**, Center for Pharmacoepidemiology, Methodology Workshop, Collegeville, PA, Oct 13, 2017.
- 2017        **Big(ger) Data: The promise and perils of data linkage**, UNC Chapel Hill Health Informatics Symposium: Using Big Data to Move the Learning Health Systems To Reality. William and Ida Friday Center for Continuing Education, Chapel Hill, NC. April 7, 2017.
- 2016        **Linking UNC's EMR Data with Commercial Claims**. UNC Center for Pharmacoepidemiology Methodology Workshop. Collegeville PA. November 4, 2016.



- 2016 **Evaluating treatment effect heterogeneity in relevant (not relative) effect measures**, Session on Precision Medicine and Causal Inference – Beyond the Average Treatment Effect, Epidemiology Congress of the Americas, Miami, Florida, June 21-24, 2016.
- 2015 **Best practices for incorporating uncertainty about cases: quantitative bias analysis**. International Society for Pharmacoepidemiology, Boston, MA, August 23-26, 2015.
- 2015 **Assessing treatment effect heterogeneity in observational studies**, Advanced Topics in Pharmacoepidemiology, Pre-Conference Educational Session, 31<sup>st</sup> Annual meeting of the International Society for Pharmacoepidemiology & Public Health, Boston, MA, August 23-26, 2015.
- 2015 **Evaluating treatment effect heterogeneity in comparative effectiveness research**, Center for Health Services Research in Primary Care, Durham Veterans Administration Medical Center, Durham, NC, May 26, 2015.
- 2015 **Treatment effect heterogeneity: Where should we be looking and how?** Triangle Comparative Effectiveness Research Symposium, RTI International, Research Triangle Park, NC, May 14, 2015.
- 2013 **Treatment Effect Heterogeneity**, Training in Epidemiologic Methods • Division of Epidemiology, Center for Devices and Radiologic Health (CDRH), Food & Drug Administration, Bethesda, Maryland, January 24, 2013.
- 2013 **Systematic Reviews and Meta-Analysis**, Training in Epidemiologic Methods • Division of Epidemiology, Center for Devices and Radiologic Health (CDRH), Food & Drug Administration, Bethesda, Maryland, January 24, 2013.
- 2013 **Integrating Study Design and Analytic Strategy**, Training in Epidemiologic Methods • Division of Epidemiology, Center for Devices and Radiologic Health (CDRH), Food & Drug Administration, Bethesda, Maryland, January 25, 2013.
- 2013 **Propensity Score Estimation**, UNC Pharmacoepidemiology Methods Training Workshop • William and Ida Friday Center for Continuing Education, Chapel Hill, NC. May 21-24, 2013.
- 2013 **Data Sources**, UNC Pharmacoepidemiology Methods Training Workshop • William and Ida Friday Center for Continuing Education, Chapel Hill, NC. May 21-24, 2013.
- 2013 **Treatment Effect Heterogeneity**, Training in Epidemiologic Methods • Division of Epidemiology, Center for Devices and Radiologic Health (CDRH), Food & Drug Administration, Bethesda, Maryland. Jan 24-25, 2013.
- 2013 **Systematic Reviews and Meta-Analysis**, Training in Epidemiologic Methods • Division of Epidemiology, Center for Devices and Radiologic Health (CDRH), Food & Drug Administration, Bethesda, Maryland. Jan 24-25, 2013.
- 2013 **Integrating Study Design and Analytic Strategy**, Training in Epidemiologic Methods • Division of Epidemiology, Center for Devices and Radiologic Health (CDRH), Food & Drug Administration, Bethesda, Maryland. Jan 24-25, 2013.
- 2012 **Combining estimators in the pursuit of robustness**, Methodological Advancements Meeting: Innovative Directions in Estimating Impact, Administration for Families & Children (AFC) / Office of Planning, Research & Evaluation (OPRE), US DHHS, Sept 6-7, 2012, Washington, DC.

- 2012 **Doubly Robust Estimation** (Pre-conference workshop), 2012 Agency for Healthcare Research & Quality DEcIDE Methods Symposium: From Efficacy to Effectiveness, June 12, 2012, Rockville, Maryland.
- 2011 **Treatment Effect Heterogeneity**, UNC Pharmacoepidemiology Methods Workshop • The Carolina Club, Chapel Hill, NC. Dec 1-2, 2011.
- 2011 **Doubly Robust Estimation of Treatment Effects**, UNC Pharmacoepidemiology Methods Workshop • The Carolina Club, Chapel Hill, NC. Dec 1-2, 2011.
- 2009 **Doubly robust estimation of treatment effects: Twice as nice or double trouble?** University of Pennsylvania School of Medicine Center for Clinical Epidemiology and Biostatistics, Philadelphia, Pennsylvania, February 26, 2009.
- 2006 **Epidemiology: The Science of Public Health**, Psychology Colloquium, Reed College, Portland, Oregon, February 2, 2006.
- 2004 **Directed Acyclic Graphs: Identifying Sources of Bias with Causal Diagrams**, Oregon Health Sciences University, Portland, Oregon, October 6, 2004.
- International
- 2020 **Intermediate Pharmacoepidemiology**. Course developer and Lead Faculty, Pre-Conference Educational Session, 34th Annual meeting of the International Society for Pharmacoepidemiology & Public Health, Berlin, Germany, August 2020
- 2018 **Intermediate Pharmacoepidemiology**. Course developer and Lead Faculty, Pre-Conference Educational Session, 34th Annual meeting of the International Society for Pharmacoepidemiology & Public Health, Prague, Czech Republic, August 2018.
- 2017 **Intermediate Pharmacoepidemiology**. Course developer and Lead Faculty, Pre-Conference Educational Session, 33<sup>rd</sup> Annual meeting of the International Society for Pharmacoepidemiology & Public Health, Montreal, Canada, August 2017.
- 2016 **Perspectives from Causal Inference in the Era of Big (Healthcare) Data**, International Society for Pharmacoepidemiology, Dublin, Ireland, August 25-28, 2016.
- 2016 **Exploring innovative methods to conduct validation using United States Medicare administrative claims data**, International Society for Pharmacoepidemiology, Dublin, Ireland, August 25-28, 2016.
- 2014 **Bias Due to Misclassification in Comparative Effectiveness Research**, Pre-Conference Educational Session, 30<sup>th</sup> Annual meeting of the International Society for Pharmacoepidemiology & Public Health, Taipei, Taiwan, October 24-27, 2014.
- 2014 **Using propensity score methods to study newly marketed drugs/devices**. Pre-Conference Educational Session, 30<sup>th</sup> Annual meeting of the International Society for Pharmacoepidemiology & Public Health, Taipei, Taiwan, October 24-27, 2014.
- 2013 **Evaluating the Comparative Safety and Effectiveness of Mesh for Pelvic Organ Prolapse: Methodological Considerations**, Medical Device Epidemiology Pre-Conference Educational Session, 29<sup>th</sup> Annual meeting of the International Society for Pharmacoepidemiology & Public Health, August 24, 2013, Montreal, Canada.

- 2012            **Methodological Considerations: Evaluating the Comparative Safety and Effectiveness of Urogynecologic Surgical Mesh**, Medical Device Epidemiology Pre-Conference Educational Session, 28<sup>th</sup> Annual meeting of the International Society for Pharmacoepidemiology & Public Health, August 22, 2012, Barcelona, Spain.

## **TEACHING ACTIVITIES**

- 2015            **Perspectives in Epidemiology and Public Health**, EPID 890 (Co-instructor)
- 2013-           **Intro to Pharmacoepidemiology**, EPID 765, Spring odd years (Co-instructor)
- 2011-           **Pharmacoepidemiology Seminar**, EPID 893, Fall and Spring, (Co-instructor)
- 2006            **Clinical Research Skills**, EPID 206 (Co-instructor)
- 2005            **Clinical Epidemiology Research Methods**, EPID 205 (Co-instructor)
- 2005-2007     **Advanced Epidemiology Methods: Modeling Causal Effects**, EPID 730/369 (Lead instructor)
- 2005-2010     **Pharmacoepidemiology Journal Club** (Co-instructor)
- 2002            **Epidemiologic Research Methods**, EPID 201 (teaching assistant)
- 2001            **Advanced Methods in Epidemiologic Analysis**, EPID 269 (teaching assistant)

### **Guest Lectures in UNC Epidemiology Curriculum**

- 2020            **Design of Clinical Research**, Epid 804, "Minimizing bias in design of observational studies of devices and medications" Feb 11, 2020
- 2019            **Design of Clinical Research**, Epid 804, "Minimizing bias in design of observational studies of devices and medications" March 5, 2019
- 2019            **Epidemiologic Research Using Healthcare Databases**, Epid 766, "Medicare 101", March 26, 2019
- 2019            **Pharmacoepidemiology Seminar**, Epid 893, "Linking Electronic Health Records and Insurance Claims Data for Clinical Research: Opportunities and Challenges", March 18, 2019.
- 2018            **Design of Clinical Research**, Epid 804, "Minimizing bias in design of observational studies of devices and medications"
- 2017            **Pharmacoepidemiology**, Epid 765, "Non-uniform treatment effects"
- 2016, 2017     **Epidemiologic Analysis of Time-to-Event Data**, Epid 722, "Doubly robust estimation"
- 2016            **Reproductive and Perinatal Epidemiology**, Epid 851, "Medications in Pregnancy"
- 2015            **Pharmacoepidemiology**, Epid 765, "Treatment effect heterogeneity"
- 2014            **Advanced Pharmacoepidemiologic Methods**, EPID 690, "Doubly Robust Estimation"
- 2011            **Readings in Epidemiologic Methods**, EPID 719, Guest consultant on epidemiologic research using administrative claims data
- 2011            **Epidemiologic Analysis of Time-to-Event Data**, EPID 722, "Comparing Groups in Time: Poisson Regression"

2011	<b>Epidemiologic Research with Healthcare Databases</b> , EPID 690, “Medicare 101: A crash course for epidemiologists”
2011	<b>Methods and Issues in Pharmacoepidemiology</b> , EPID 765, “Critical Reading of the Pharmacoepidemiologic Literature”
2010	<b>Readings in Epidemiologic Methods</b> , EPID 719, Guest consultant on doubly robust estimators
2009	<b>Methods and Issues in Pharmacoepidemiology</b> , EPID 765, “Doubly Robust Estimators: Twice as nice or double trouble?”
2007	<b>Readings in Epidemiologic Methods</b> , EPID 719, Guest consultant on propensity score methods
2006	<b>Fundamentals of Epidemiology</b> , EPID 710, Two guest lectures titled “Information bias” and “Selection bias”

## GRADUATE STUDENT SUPERVISION

<b>Name</b>	<b>Year Completed</b>	<b>Thesis / Dissertation Title</b>
<b><i>Chair of Doctoral Committee (8)</i></b>		
Jessica Young	2020 (anticipated)	Opioids use for acute pain management associated with outpatient surgery: opportunities to reduce diversion and iatrogenic addiction
Elizabeth Suarez	2019	Safety of ondansetron exposure during pregnancy
Suzanne Landi	2018	Comparative safety and effectiveness of metformin versus insulin for the gestational diabetes
Mitchell Conover	2017	Methods for incorporating confounder data when duration of continuous enrollment varies
Joann Gruber	2017	Timing of rotavirus vaccination and incidence of severe rotavirus gastroenteritis among infants in low-and middle-income countries
Wendy Camelo Castillo, MD	2013	Pharmacological Treatment of Gestational Diabetes and Association with Adverse Maternal and Neonatal Outcomes
Kristen B Bibeau (Van Dole)	2011	Evaluation of the menopause-specific quality of life questionnaire and association of vasomotor and psychosocial symptoms among postmenopausal women in the United States
Mary Elizabeth Ritchey	2007	Central line-associated blood-stream infections and ventilator-associated pneumonias: changing infection rate across duration of hospitalization and with different definitions of time at risk

***Chair of Master's Committee (6)***

Jessica Young	2017	Tolerance prior to initiation of high dose opiates in the US
Mitchell Conover	2014	Hysteroscopic vs. laparoscopic sterilization: short term incidence of pain or bleeding, U.S. 2005-2011
Emily Ko, MD	2013	Metformin use and incidence of endometrial cancer in women with type II diabetes
Erica Berggren, MD	2011	Impact of changing diagnostic criteria for gestational diabetes on neonatal outcomes
Mary Elizabeth Ritchey	2007	Effect of antiretroviral class on hepatotoxicity in HIV-infected patients
Barbara Stegman, MD	2006	A Logistic Model for the Prediction of Endometriosis

***Member of Doctoral Committee (18)***

Tiansheng Wang	2021 (anticipated)	<i>proposal defense scheduled for 4/27/2020</i>
Arti Virkud	2021 (anticipated)	Estimating the Comparative Effect of Loop Diuretics Using Claims and EHR Data and Precision Medicine Machine Learning Methods ( <i>proposal defense scheduled for 2/26/2020</i> )
Sapna Rao	2020 (anticipated)	Comparative effectiveness of anticoagulant therapy in hemodialysis patients with atrial fibrillation
Kanecia Zimmerman	2020 (anticipated)	Safety and effectiveness of pediatric sedation and pain management during hospitalization
Phyo Htoo	2020 (anticipated)	Comparative performance of methods to estimate the effects of medications in the presence of a calendar time trend in prescribing
Sarah Hoffman	2019	Oral Contraceptives and Uterine Fibroid Development in Young, Black Women
Tracy Kinsey	2019	Initiation of non-steroidal anti-inflammatory drug use and risk for venous thromboembolism in U.S. women
Elizabeth Dehmer	2019	Pregnancy Complications and Maternal Chronic Kidney Disease
Mugdha Gokhale	2016	Cardiovascular effects of incretin-based antihyperglycemic drugs relative to treatment alternatives in older adults
Jonathan Todd	2015	Statin Use in the Women's Interagency HIV Study: Disparities in Use, Lipid Effects, and Unintended Effects
Jin-Liern Hong	2015	Breast Cancer Risk after Metformin initiation in Older Women – the Role of Study Design, Potential Confounding by Body Mass Index, and Differential Detection

Richard Wyss	2015	Disease Risk Scores for Confounding Control When Evaluating Evolving Drug Therapies
Nabarun Dasgupta	2013	Pharmacoepidemiology of the abuse of pharmaceutical controlled substances
Catherine Panozzo	2013	Patterns of rotavirus vaccine uptake, use, and effectiveness in privately-insured US children, 2006-2010
Stephanie Watkins	2012	Interventional Physical and Occupational Therapy Services and Motor Development among Low Birth Weight Infants
J Bradley Layton	2012	The Risk of Acute Kidney Injury in Statin Initiators
Reem Hasan	2009	Vaginal bleeding in early pregnancy: patterns, predictors, and association with miscarriage
Daniel Westreich	2008	Tuberculosis treatment and risk of stavudine substitution in first line antiretroviral therapy

### **Current Advisees**

PhD Students (*prior to thesis proposal defense*)

Sara Dejene

Megan Delgado

### **GRANTS & CONTRACTS**

(Total costs, unless otherwise noted)

#### **Active**

**75F40119C10115 (Jonsson Funk)** **9/23/2019 – 3/22/2021**  
**Food and Drug Administration (FDA)** **\$1,275,489**

**Methodological Advances in the Assessment of Uncontrolled Confounding**

This project will evaluate and inform the use of sensitivity analyses used to assess the risk of uncontrolled confounding in observational studies and provide training to FDA personnel.

Role: PI (40% effort)

**CER-2017C3-9230 (Jonsson Funk / Flory)** **1/1/2019 – 6/31/2021**  
**PCORI/Cornell University Weill Medical College** **\$571,559**

**Comparative Effectiveness of Metformin for Type 2 Diabetes with Chronic Kidney Disease**

This proposed research tests the hypothesis that metformin is safer and more effective than commonly-used alternatives in improving patient-centered outcomes for patients with type 2 diabetes and chronic kidney disease.

Role: Site PI (20% effort in Year 1; 15% effort in Years 2-3)

**HHSF223201810183C (Marshall)** **9/1/2018 – 8/31/2022**  
**Food and Drug Administration (FDA)** **\$7,991,522**

**Methodological Advances in Evaluating Abuse Deterrent Opioid Analgesics**

Despite efforts of established data providers, there is room for innovation in analytic methods for abuse deterrent formulations (ADFs). The outputs from each Aim will include computer code, guides and webinars disseminated for free via the Internet, coupled with gathering of feedback, allowing other researchers to advance the methodologic rigor of ADF epidemiology.

Role: Co-I (5% effort)

**R36 DA045885 (Young)**

**9/1/2018 – 8/31/2020**

**NIH/NIDA**

**\$147,655**

**Identifying opportunities to reduce unnecessary opioid exposure and prevent iatrogenic addiction after surgery**

Estimate the effect of initial post-operative opioid prescribing (Aim 1) and perioperative administration of gabapentinoids (Aim 2) on risk of long-term opioid use, adverse opioid-related outcomes, and mortality across a broad range of surgeries. Use linked Medicare claims and electronic medical record (EMR) data to evaluate agreement between data sources and quantify potential bias in studies limited to claims- or EMR-only data sources (Aim 3).

Role: Faculty Sponsor (No salary support)

**1U01DP006369-01 (Kappelman/Lewis)**

**9/30/2018 - 9/29/2023**

**CDC/Crohn's and Colitis Foundation of America (CCFA)**

**\$662,365**

**Diversity Within the Incidence, Prevalence, Treatment and Outcomes of Patients with IBD**

Aim are to 1) build a registry of patients with incident diagnosis of Crohn's Disease and Ulcerative Colitis by leveraging the existing research infrastructure of the Crohn's & Colitis Foundation and the ImproveCareNow Network; 2) estimate the prevalence and incidence of CD and UC at a national level using representative data that encompasses populations from all segments of the socioeconomic and geographic distribution of the United States; and 3) determine whether race and IBD practice volume are associated with patterns of care and key outcomes including use of biologics, steroids, narcotics, hospitalization and surgery at a national level and within high volume IBD centers.

Role: Co-I (10% effort in Year 1, 4% in Years 2-4)

**1U01DD001231-01 (Olshan/Desrosiers)**

**9/1/2018 – 8/31/2023**

**Centers for Disease Control and Prevention**

**\$4,999,266**

**BD-STEPS II Core at North Carolina Center for Birth Defects Research and Prevention (NC BDSTEPS II Core)**

Using a population-based, multi-center case-control study design, the new *Birth Defects Study To Evaluate Pregnancy exposures II* (BD-STEPS II) will conduct research with high potential to prevent birth defects by identifying modifiable maternal exposures in early pregnancy that may increase the risk of pregnancy affected by certain major, structural birth defects.

Role: Co-I (5% effort)

**1 U54 TR002255 (Buse/Carey)**

**4/1/2018–3/31/2023**

**NIH/NCATS**

**\$ 60,891,563**

**Biostatistics, Epidemiology, and Research Design, NC TraCS**

Support robust research to evaluate the benefits and/or harms of medical interventions including procedures, tests and treatments.

Role: Co-Investigator (20% effort)

**1R01AG056479 (Stürmer)**  
**NIH/NIA**

**9/15/2017 – 4/30/2021**  
**\$1,948,930**

**Propensity scores and preventive drug use in the elderly (R01 AG023178)**

Insights into and development of different novel analytic strategies to control for selection and confounding bias in non-experimental research based on propensity scores and validation data.

Role: Co-Investigator (10%)

**R40MC29455-01-00 (Stuebe)**  
**HRSA**

**4/1/2016 –3/31/2020 (nce)**  
**\$897,986**

**Care4Moms**

Assess the unmet healthcare needs of mothers of medically fragile infants – those who spend 3 or more days in the NICU – compared to mothers of healthy infants.

Role: Co-Investigator (5% effort)

**R01 HL118255 (Jonsson Funk)**  
**NIH/NHLBI**

**5/1/2014–4/30/2020 (nce)**  
**\$1,684,991**

**Methods for Estimating Sex Differences in Safety and Effectiveness of Drugs**

The major goals of this project are to develop, test, implement, and disseminate reliable methods for evaluating sex differences in the comparative effectiveness and safety of pharmacotherapy.

Role: PI

**GlaxoSmithKline, UCB BioSciences, Takeda, AbbVie,**  
**Boehringer Ingelheim, Merck Inc. (past member)**

**1/1/2013- Present**  
**\$2,325,000**

**Center for Pharmacoepidemiology**

The Center provides unrestricted support for students, postdocs, and faculty affiliated with the pharmacoepidemiology program

Role: Director (2018-present); member (2013-2018)

**GlaxoSmithKline**  
**N/A**

**2002-Present**  
**\$3,335,000**

**UNC-GSK Center of Excellence in Pharmacoepidemiology and Public Health**

The Center provides unrestricted support for students, postdocs, and faculty affiliated with the pharmacoepidemiology program

Role: Director (2018-present); member (2004-2018)

***Pending***

**1P30DK124723-01 (McClain/Buse)**  
**NIH/NIDDK / Wake Forest**

**4/1/2020 – 3/31/2024**  
**\$1,366,188 (UNC sub)**

**NC Diabetes Research Center**

Objectives of this project are to 1) enhance patient-centered outcomes research (PCOR) and comparative effectiveness research (CER) by directing investigators to appropriate resources and enhanced methods for trial design, cohort identification, data management and analysis; 2) implement advanced statistical and trial design methodologies as appropriate to diabetes studies to enhance efficiency; and 3) enhance the ability to approach clinical questions employing pragmatic trials.

Role: Associate Director



- TBD (Jones)** **10/01/2020 – 9/30/2025**  
**NIH/NIA** **\$3,679,715**  
**Predicting medication non-persistence following stroke to limit re-admissions in older adults**  
Objectives of this project are to develop innovative prediction models of non-persistence, evaluate how transitional care models may impact medication persistence, and study the impact of persistence on health outcomes including hospital re-admissions and mortality.  
Role: Co-I
- Completed**
- 2KR1001806 (Young)** **1/1/2019-12/31/2019**  
**NC TraCS Institute** **\$2,000**  
**Examining the role of perioperative gabapentinoid use in preventing long-term opioid therapy**  
Role: Faculty sponsor (No salary support)
- 2KR1001806 (Suarez)** **4/1/2018-3/30/2019**  
**NC TraCS Institute** **\$2,000**  
**Use of ondansetron for nausea and vomiting during pregnancy and adverse pregnancy outcomes**  
Role: Faculty sponsor (No salary support)
- UL1 TR001111-02 (Buse/Carey)** **9/26/2013–4/30/2018**  
**NIH/NCATS** **\$7,324,022**  
**Comparative Effectiveness Research (CER) Strategic Initiative (SI), NC TraCS**  
Build infrastructure to support robust comparative effectiveness studies to provide definitive evidence of the benefits and/or harms of tests and treatments.  
Role: Co-Investigator (25% effort)
- (Stürmer)** **10/1/2014 -9/31/2017**  
**AstraZeneca** **\$367,598**  
**Estimating treatment effects in defined external populations based on data from RCTs**  
To develop a systematic approach in assessment of RCT generalizability to regional real-world populations which can be considered during both trial design and subsequent communications with regulators, payers and practitioners in both pre-launch and post launch stages  
Role: Co-Investigator (15% effort)
- R56 AG023178 (Stürmer)** **4/1/2012 – 8/30/2016**  
**NIH/NIA** **\$1,174,552**  
**Propensity scores and preventive drug use in the elderly (R01 AG023178)**  
Insights into and development of different novel analytic strategies to control for selection and confounding bias in non-experimental research based on propensity scores and validation data.  
Role: Co-Investigator (5%)
- RUF-IMEDS-FP\_0004 (Jonsson Funk)** **9/1/2015 – 8/31/2016**  
**Reagan-Udall Foundation for the FDA - IMEDS** **\$100,000**  
**PROMPT Usability and Performance Evaluation**  
Evaluate the usability and bias of the PROMPT surveillance tool.  
Role: PI (15% effort)

- 1IP2PI000075-01 (Stürmer)** **10/1/2012 – 12/31/2014**  
**PCORI - Pilot Projects Program** **\$690,502**  
**Methods to Increase Validity of Comparative Effectiveness Research in the Elderly**  
The major goals of this project are to develop and refine methods to handle confounding by indication, selection bias due to treatment changes, evaluate treatment effect heterogeneity when the background risk varies across subgroups, and address concerns about competing risks.  
Role: Co-Investigator (20% effort)
- HHSF223201111878P (Stürmer)** **9/26/2011 – 9/25/2013**  
**FDA/CDRH** **\$45,763**  
**Advancing the Specialized Methodological Expertise for Medical Device Epidemiologists**  
The purpose of this service contract was to assess the current expertise within the Division of Epidemiology in the Office of Surveillance and Biometrics, Center for Devices and Radiological Health at FDA and to present proposed solutions for increasing specialized methodological expertise in targeted areas within the discipline of medical device epidemiology.  
Role: Co-Investigator (No salary support)
- (Jonsson Funk / Camelo Castillo)** **1/1/2011-12/31/2012**  
**NC Tracs** **\$10,000**  
**Developing Methods to Improve Estimation of Gestational Age at Delivery Using CDW-H**  
Identify items from billing data that could be used to improve estimation of gestational age for studies of drug effects on pregnancy outcomes.  
Role: Co-PI (No salary support)
- GIL200811.0010 (Stürmer)** **8/1/2009 - 7/31/2012**  
**UNC Gillings Innovation Lab** **\$250,000**  
**PharmacoEpidemiology Gillings Innovation Lab (PEGIL) for the Population-Based Evaluation of Drug Benefits and Harms in Older US Adults**  
Establish critical data infrastructure for conducting pharmacoepidemiology research on the safety and effectiveness of medications commonly used in older adults.  
Role: Co-Investigator (No salary support)
- K02 HS017950 (Jonsson Funk)** **2/1/09-4/30/14**  
**DHHS/AHRQ** **\$653,200**  
**Doubly robust estimation: Best practices for comparative effectiveness research**  
The major goals of this project were to systematically evaluate key aspects of doubly robust (DR) estimators including bias, efficiency, covariate selection, and non-uniform treatment effects using large scale simulations and applied analyses in comparative effectiveness research.  
Role: PI (90% effort)
- R01 HD049675 (Hartmann/Olshan)** **5/01/06-2/28/11**  
**NIH/NICHD** **\$2,497,836**  
**Non-steroidal Anti-Inflammatory Use and Miscarriage**  
This study was designed to address whether: 1) NSAID use is independently associated with increased risk of spontaneous abortion; 2) whether any effect depends on cumulative dose, regular vs. episodic use, or timing of exposure in critical developmental windows.  
Role: Co-Investigator (30% effort)

- U18 HS010397 (Guess/Stiles)** **9/29/05 - 9/28/07**  
**DHHS/ARHQ** **\$97,755**  
**Rational Therapeutics for the Pediatric Population: Supplement** **(project directs)**  
This study developed and disseminated SAS-based tools for conducting studies of comparative effectiveness using doubly-robust estimation.  
Role: Co-Investigator, Project PI (20% effort)
- (Jonsson Funk)** **2005-2006**  
**UNC-GSK Center for Excellence in Pharmacoepidemiology & Public Health** **\$12,850**  
**Prospective assessment of prescription and over-the-counter medication in the first trimester: Pilot of a web-based diary**  
Develop and pilot a web-based diary for collecting prospective data on exposure to over-the-counter pain medications during early pregnancy.  
Role: PI (No salary support)
- Contract No. 290-02-0016 (Lohr/Carey)** **2005-2006**  
**AHRQ/OMAR** **\$250,000**  
**Cesarean Delivery on Request** **(direct cost)**  
To systematically review the evidence on maternal and infant outcomes of cesarean delivery on maternal request (CDMR) compared with planned vaginal delivery (PVD).  
Role: Epidemiologist (5% effort)
- R01 AI066920 (Jonsson Funk)** **6/15/05-8/31/09**  
**NIH/NIAID** **\$399,339**  
**Effect of earlier HAART on HIV disease progression and survival**  
The primary aims of this study were to 1) obtain precise estimates of the effect of initiating HAART compared to deferring HAART on first AIDS diagnosis or death among asymptomatic seroconverters at each of three stages of HIV infection: 200-349, 350-499, and 500-1000 cells/mm<sup>3</sup> and 2) determine the extent to which the observed effect of HAART is altered by adjusting for differences in the distribution of important predictors of disease progression and treatment initiation.  
Role: PI (30% effort)
- R34 HD048641 (Visco)** **1/1/2005-12/31/2006**  
**NIH/NICHD** **\$146,000**  
**Cesarean After Sphincter Tear (CAST) RCT Planning Grant**  
To plan and conduct essential pilot work for a future multicenter randomized clinical trial to quantify the effect of planned Cesarean section compared to a trial of vaginal delivery on the risk of developing anal incontinence among women that sustained a 3rd or 4th degree laceration of the anal sphincter during their first deliveries.  
Role: Biostatistician (2% effort)
- (Jonsson Funk)** **6/21/2004-6/20/2006**  
**UNC CFAR** **\$20,000**  
**Improving control of confounding in observational studies of HIV treatment effects and adverse events using artificial neural networks**  
To investigate the use of machine learning (including neural networks) to improve fit of propensity score models for control of confounding.  
Role: PI (No salary support)

## SERVICE

### *University of North Carolina at Chapel Hill*

- 2018 - Director, Center for Pharmacoepidemiology, Dept of Epidemiology, UNC Gillings School of Global Public Health
- 2018 - Head, pharmacoepidemiology program area
- 2017 Invited reviewer, UNC Office of Research Development
- 2014 Member, Search Committee, Research-Track Position in Pharmacoepidemiology, Department of Epidemiology
- 2013 Member, Selection Committee for the Kark Distinguished Teaching Assistant Award
- 2011 Member, Selection Committee for the Cornoni-Huntley Scholarship and the Tyroler Scholarship, Department of Epidemiology
- 2008-2009 Member, Search Committee, Tenure-Track Position in Pharmacoepidemiology, Department of Epidemiology
- 2004 - Member, Pharmacoepidemiology / Healthcare Epi Qualifying Exam Committee, Department of Epidemiology
- 2004 - 2013 Faculty mentor, TECT T32 training in epidemiology and clinical trials fellowship program

### *Professional and Public Service*

- 2019 - Member, Real World Evidence Manuscript Initiative, International Society for Pharmacoepidemiology and Public Health
- 2019 Invited Panelist and representative of the International Society for Pharmacoepidemiology and Public Health (ISPE), Public Stakeholder Meeting regarding International Conference on Harmonization (ICH) E8(R1) – General Considerations for Clinical Studies, Food and Drug Administration, October 31, 2019.
- 2018 - 2019 Member, Medicare Linkage Workgroup, PCORnet Coordinating Center
- 2018 Invited expert, Real World Evidence Collaborative Synthesis Workshop, Duke-Margolis RWE Collaborative, June 19, 2018.
- 2018 Invited expert, Real World Evidence and Real-World Data Workshop, Duke-Margolis RWE Collaborative, April 27, 2018.
- 2017 Report reviewer, Patient Centered Outcomes Research Institute
- 2016 - UNC representative, Data Request Review Committee (DRRC) for the Carolinas Collaborative
- 2015 Invited reviewer, Sir Henry Wellcome Postdoctoral Fellowship, Wellcome Trust
- 2014 - 2015 Ad-hoc reviewer, Pure Methods Study Section, Patient Centered Outcomes Research Institute
- 2012 Ad-hoc reviewer, Applications for MDEpiNet Master Contract, Center for Devices and Radiologic Health (CDRH), Food and Drug Administration (FDA)
- 2010 DEcIDE report reviewer, Agency for Healthcare Research and Quality, Effective Health Care Program

*Invited manuscript reviews*

- 2019 - Statistics in Medicine
- 2017 - Pediatric Infectious Diseases Journal
- 2016 - Drug Safety
- 2016 - British Journal of Obstetrics and Gynecology
- 2016 - Circulation: Cardiovascular Quality & Outcomes
- 2014 - PLoS ONE
- 2012 - BMC Medical Research Methodology
- 2012 - Expert Opinion on Drug Safety
- 2011 - Pharmacoepidemiology & Drug Safety
- 2011 - Epidemiology
- 2008 - American Journal of Epidemiology
- 2008 - Antiviral Therapy
- 2007 - HIV Clinical Trials
- 2005 - Journal of Clinical Epidemiology
- 2004 - International Journal of Epidemiology

*Invited Abstract Reviews*

- 2011 Annual Scientific Meeting of the Society for Epidemiologic Research
- 2010 - Annual Scientific Meeting of the International Society for Pharmacoepidemiology
- 2004 – 2009 Annual Women’s Health Research Conference, University of North Carolina at Chapel Hill