

WENDY Y. CHENG, PH.D., M.P.H.

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Dr. Cheng specializes in applying epidemiologic methods to assess the causal relationship of therapeutic agents with health and safety outcomes in observational studies. Her experience includes post-authorization safety studies (PASS) for regulatory bodies, natural history studies, and real-world evidence (RWE) development across multiple therapeutic areas. Dr. Cheng has particular expertise in applying advanced methodologies to address complex health care research challenges. She has used machine learning and other predictive modeling techniques, including latent class analysis to identify cost clusters in disease patient population, group-based trajectory analysis to identify disease prognosis patterns, and rule-based approaches to diagnostic algorithms. Dr. Cheng has collected and utilized data from administrative insurance claims, large patient and physician surveys, clinical trials, electronic medical records, longitudinal observational studies, and site-based and panel-based medical chart reviews. She has conducted studies in more than 10 countries and published her research in numerous medical journals. Prior to joining Analysis Group, Dr. Cheng served as a research scientist at Columbia University and worked as a biostatistician in the Clinical Trials Network of the National Institute on Drug Abuse.

EDUCATION

2019 Ph.D., epidemiology, Columbia University
2007 M.P.H., epidemiology, Columbia University
2005 B.S., psychobiology, University of California, Los Angeles

PROFESSIONAL EXPERIENCE

2011–Present Analysis Group, Inc.
 Vice President (2021–Present)
 Manager (2015–2020)
 Associate (2011–2014)

2011 Analytica International
 Manager

2007–2011 Columbia University Irving Medical Center and New York State Psychiatric Institute
 Biostatistician and Research Scientist

2006 Centers for Disease Control and Prevention
 Summer Fellow

JOURNAL PUBLICATIONS

1. Singer D, Thompson-Leduc P, Poston S, Gupta D, **Cheng WY**, Ma S, Devine F, Enrique A, Duh MS, Curtis JR. Clinical and Economic Burden of Herpes Zoster in Patients with Rheumatoid Arthritis: A Retrospective Cohort Study Using Administrative Claims. *Rheumatol Ther.* 2023 May 23.
2. Singer D, Thompson-Leduc P, Gupta D, **Cheng WY**, Poston S, Ma S, Pawlowski JE, Duh MS, Morris ED, Devine F, Farraye FA. Incidence and risk of herpes zoster in patients with ulcerative colitis and Crohn's disease in the USA. *Gastroenterol. Rep. (Oxf).* 2023 Apr 12.
3. May D, Kponee-Shovein K, Mahendran M, Downes N, Sheng K, Lefebvre P, **Cheng WY**. Epidemiology and patient journey of Rett syndrome in the United States: a real-world evidence study. *BMC Neurol.* 2023 Apr 4;23(1):141.
4. Singer D, Thompson-Leduc P, Poston S, Gupta D, **Cheng WY**, Ma S, Devine F, Duh MS, Curtis JR. Incidence of Herpes Zoster in Patients With Rheumatoid Arthritis in the United States: A Retrospective Cohort Study. *J. Rheumatol.* 2023 Feb 1.
5. Thompson-Leduc P, Ghaswalla P, **Cheng WY**, Wang MJ, Bogart M, Patterson BJ, Duh MS, Park S, Yawn BP. Chronic obstructive pulmonary disease is associated with an increased risk of herpes zoster: A retrospective United States claims database analysis. *Clin Respir J.* 2022 Dec;16(12):826-834.
6. Yang X, Yoo HK, Amin S, **Cheng WY**, Sundaresan S, Zhang L, Duh MS. Burden Among Caregivers of Pediatric Patients with Neurofibromatosis Type 1 (NF1) and Plexiform Neurofibroma (PN) in the United States: A Cross-Sectional Study. *Neurol Ther.* 2022 Sep;11(3):1221-1233.
7. Choi GS, Sim WY, Kang H, Huh CH, Lee YW, Shantakumar S, Ho YF, Oh EJ, Duh MS, **Cheng WY**, Bobbili P, Thompson-Leduc P, Ong G. Long-Term Effectiveness and Safety of Dutasteride versus Finasteride in Patients with Male Androgenic Alopecia in South Korea: A Multicentre Chart Review Study. *Ann. Dermatol.* 2022 Oct;34(5):349-359.
8. Bhattacharyya N, Silver J, Bogart M, Kponee-Shovein K, **Cheng WY**, Cheng M, Cheung HC, Duh MS, Hahn B. Profiling Disease and Economic Burden in CRSwNP Using Machine Learning. *J. Asthma Allergy.* 2022 Sep 30;15:1401-1412.
9. Yang X, Yoo HK, Amin S, **Cheng WY**, Sundaresan S, Zhang L, Duh MS. Clinical and humanistic burden among pediatric patients with neurofibromatosis type 1 and plexiform neurofibroma in the USA. *Child's Nerv. Syst.* 2022 Aug;38(8):1513-1522.
10. **Cheng WY**, Sarda SP, Mody-Patel N, Krishnan S, Yenikomshian M, Kunzweiler C, Vu JD, Cheung HC, Duh MS. Real-World Eculizumab Dosing Patterns Among Patients with Paroxysmal Nocturnal Hemoglobinuria in a US Population. *ClinicoEconomics Outcomes Res.* 2022 May 3;14:357-369.
11. **Cheng WY**, Chang R, Novy P, O'Connor C, Duh MS, Hoge CS. Determinants of Meningococcal ACWY vaccination in adolescents in the US: completion and compliance with the CDC recommendations. *Hum Vaccin Immunother.* 2020;16(1):176-188.
12. Pepose JS, Sarda SP, **Cheng WY**, McCormick N, Cheung HC, Bobbili P, Joseph C, Duh MS. Direct and Indirect Costs of Infectious Conjunctivitis in a Commercially Insured Population in the United States. *Clin Ophthalmol.* 2020 Feb 11;14:377-387.
13. Akinci B, Oral EA, Neidert A, Rus D, **Cheng WY**, Thompson-Leduc P, Cheung HC, Bradt P, Foss de Freitas MC, Montenegro RM, Fernandes VO, Cochran E, Brown RJ. Comorbidities and Survival in Patients With Lipodystrophy: An International Chart Review Study. *J Clin Endocrinol Metab.* 2019 Nov 1;104(11):5120-5135.
14. Tjulandin SA, Tryakin AA, Besova NS, Sholokhova E, Ivanova JI, **Cheng WY**, Schmerold LM, Thompson-Leduc P, Novick D. Real-world treatment patterns among patients with advanced gastric cancer in Russia: a chart review study. *J Drug Assess.* 2019 Sep 17;8(1):150-158.
15. Vekeman F, Piña-Garza JE, **Cheng WY**, Tuttle E, Giguère-Duval P, Oganisian A, Damron J, Sheng Duh M, Shen V, Saurer TB, Montouris GD, Isojarvi J. Development of a classifier to identify patients with probable Lennox-Gastaut syndrome in health insurance claims databases via random forest methodology. *Curr Med Res Opin.* 2019 Aug;35(8):1415-1420.

16. Ferro TJ, Sundaresan AS, Pitcavage JM, Ivanova JI, Schmerold L, Ariely R, Parikh R, **Cheng WY**. Clinical burden of asynchrony in patients with asthma when using metered-dose inhalers for control. *Allergy Asthma Proc*. 2019 Jan 1;40(1):21-31.
17. Oh WK, **Cheng WY**, Miao R, Vekeman F, Gauthier-Loiselle M, Duh MS, Drea E, Szatrowski TP. Real-world outcomes in patients with metastatic castration-resistant prostate cancer receiving second-line chemotherapy versus an alternative androgen receptor-targeted agent (ARTA) following early progression on a first-line ARTA in a US community oncology setting. *Urol Oncol*. 2018 Nov;36(11):500.e1-500.e9.
18. Vekeman F, Weiss L, Aram J, Ionescu-Ittu R, Moosavi S, Xiao Y, **Cheng WY**, Bhak RH, Tawadrous M, Capparella MR, Montravers P, Duh MS. Retrospective cohort study comparing the risk of severe hepatotoxicity in hospitalized patients treated with echinocandins for invasive candidiasis in the presence of confounding by indication. *BMC Infect Dis*. 2018 Aug 29;18(1):438.
19. Kallenbach L, Shui AM, **Cheng WY**, Fan T, Hu W, Zichlin ML, Duh MS, Ye F, Levin PA. Predictors and Clinical Outcomes of Treatment Intensification in Patients With Type 2 Diabetes Uncontrolled on Basal Insulin in a Real-World Setting. *Endocr Pract*. 2018 Sep;24(9):805-814.
20. **Cheng WY**, Said Q, Hao Y, Xiao Y, Vekeman F, Bobbili P, Duh MS, Nandal S, Blinder M. Adherence to iron chelation therapy in patients who switched from deferasirox dispersible tablets to deferasirox film-coated tablets. *Curr Med Res Opin*. 2018 Nov;34(11):1959-1966.
21. Vichinsky E, Cohen A, Thompson AA, Giardina PJ, Lal A, Paley C, **Cheng WY**, McCormick N, Sasane M, Qiu Y, Kwiatkowski JL. Epidemiologic and clinical characteristics of nontransfusion-dependent thalassemia in the United States. *Pediatr Blood Cancer*. 2018 Jul;65(7):e27067.
22. Ghaswalla PK, Patterson BJ, **Cheng WY**, Duchesneau E, Machecha M, Duh MS. Hepatitis A, B, and A/B vaccination series completion among US adults: A claims-based analysis. *Hum Vaccin Immunother*. 2018;14(11):2780-2785.
23. Williamson T, **Cheng WY**, McCormick N, Vekeman F. Patient Preferences and Therapeutic Satisfaction with Topical Agents for Rosacea: A Survey-Based Study. *Am Health Drug Benefits*. 2018 Apr;11(2):97-106.
24. Jabbour E, DerSarkissian M, Duh MS, McCormick N, **Cheng WY**, McGarry LJ, Souroutzidis A, Huang H, O'Brien S, Ravandi F, Kantarjian HM. Efficacy of Ponatinib Versus Earlier Generation Tyrosine Kinase Inhibitors for Front-line Treatment of Newly Diagnosed Philadelphia-positive Acute Lymphoblastic Leukemia. *Clin Lymphoma Myeloma Leuk*. 2018 Apr;18(4):257-265.
25. Oh WK, Miao R, Vekeman F, Sung J, **Cheng WY**, Gauthier-Loiselle M, Dhawan R, Duh MS. Patient characteristics and overall survival in patients with post-docetaxel metastatic castration-resistant prostate cancer in the community setting. *Med Oncol*. 2017 Aug 10;34(9):160.
26. Oh WK, Miao R, Vekeman F, Sung J, **Cheng WY**, Gauthier-Loiselle M, Dhawan R, Duh MS. Real-world Characteristics and Outcomes of Patients With Metastatic Castration-resistant Prostate Cancer Receiving Chemotherapy Versus Androgen Receptor-targeted Therapy After Failure of First-line Androgen Receptor-targeted Therapy in the Community Setting. *Clin Genitourin Cancer*. 2017 Jun 19:S1558-7673(17)30170-2.
27. Piña-Garza JE, Montouris GD, Vekeman F, **Cheng WY**, Tuttle E, Giguere-Duval P, Duh MS, Shen V, Saurer TB, Isojarvi J. Assessment of treatment patterns and healthcare costs associated with probable Lennox-Gastaut syndrome. *Epilepsy Behav*. 2017 Aug;73:46-50.
28. Quinlan SC, **Cheng WY**, Ishihara L, Irizarry MC, Holick CN, Duh MS. Development and validation of an algorithm for identifying urinary retention in a cohort of patients with epilepsy in a large US administrative claims database. *Pharmacoepidemiol Drug Saf*. 2016 Apr;25(4):413-21.
29. Vekeman F, Sasane M, **Cheng WY**, Ramanakumar AV, Fortier J, Qiu Y, Duh MS, Paley C, Adams-Graves P. Adherence to iron chelation therapy and associated healthcare resource utilization and costs in Medicaid patients with sickle cell disease and thalassemia. *J Med Econ*. 2016;19(3):292-303.
30. Vekeman F, **Cheng WY**, Sasane M, Huynh L, Duh MS, Paley C, Mesa RA. Medical complications, resource utilization and costs in patients with myelofibrosis by frequency of blood transfusion and iron chelation therapy. *Leuk Lymphoma*. 2015;56(10):2803-11.

31. Kaiser K, **Cheng WY**, Jensen S, Clayman ML, Thappa A, Schwiep F, Chawla A, Goldberger JJ, Col N, Schein J. Development of a shared decision-making tool to assist patients and clinicians with decisions on oral anticoagulant treatment for atrial fibrillation. *Curr Med Res Opin.* 2015 Dec;31(12):2261-72.
32. White AG, LeCates J, Birnbaum HG, **Cheng WY**, Roland CL, Mardekian J. Positive subjective measures in abuse liability studies and real-world nonmedical use: Potential impact of abuse-deterrent opioids on rates of nonmedical use and associated healthcare costs. *J Opioid Manag.* 2015 May-Jun;11(3):199-210.
33. Carlozzi NE, Victorson D, Sung V, Beaumont JL, **Cheng WY**, Gorin B, Duh MS, Samuelson D, Tulsy D, Gutierrez S, Nowinski CJ, Mueller A, Shen V, Frank S. HD-PRO-TRIAD™ Validation: A Patient-reported Instrument for the Symptom Triad of Huntington's Disease. *Tremor Other Hyperkinet Mov (N Y).* 2014 Apr 14;4:223.
34. Victorson D, Carlozzi NE, Frank S, Beaumont JL, **Cheng WY**, Gorin B, Duh MS, Samuelson D, Tulsy D, Gutierrez S, Nowinski CJ, Mueller A, Shen V, Sung V. Identifying Motor, Emotional-Behavioral, and Cognitive Deficits that Comprise the Triad of HD Symptoms from Patient, Caregiver, and Provider Perspectives. *Tremor Other Hyperkinet Mov (N Y).* 2014 Apr 14;4:224.
35. Raby WN, Rubin EA, Garawi F, **Cheng WY**, Mason E, Sanfilippo L, Lord S, Bisaga A, Aharonovich E, Levin F, McDowell D, Nunes EV. A randomized, double-blind, placebo-controlled trial of venlafaxine for the treatment of depressed cocaine-dependent patients. *Am J Addict.* 2014 Jan-Feb;23(1):68-75.
36. Michna E, **Cheng WY**, Korves C, Birnbaum H, Andrews R, Zhou Z, Joshi AV, Schaaf D, Mardekian J, Sheng M. Systematic literature review and meta-analysis of the efficacy and safety of prescription opioids, including abuse-deterrent formulations, in non-cancer pain management. *Pain Med.* 2014 Jan;15(1):79-92.
37. Carpenter KM, **Cheng WY**, Smith JL, Brooks AC, Amrhein PC, Wain RM, Nunes EV. "Old dogs" and new skills: how clinician characteristics relate to motivational interviewing skills before, during, and after training. *J Consult Clin Psychol.* 2012 Aug;80(4):560-73.
38. Horey JT, Mariani JJ, **Cheng WY**, Bisaga A, Sullivan M, Nunes E, Levin FR. Comparison of substance use milestones in cannabis- and cocaine-dependent patients. *J Addict Dis.* 2012;31(1):60-6.
39. Bisaga A, Sullivan MA, **Cheng WY**, Carpenter KM, Mariani JJ, Levin FR, Raby WN, Nunes EV. A placebo controlled trial of memantine as an adjunct to oral naltrexone for opioid dependence. *Drug Alcohol Depend.* 2011 Dec 1;119(1-2):e23-9.
40. Mariani JJ, **Cheng WY**, Bisaga A, Sullivan M, Carpenter K, Nunes EV, Levin FR. Comparison of clinical trial recruitment populations: treatment-seeking characteristics of opioid-, cocaine-, and cannabis-using participants. *J Subst Abuse Treat.* 2011 Jun;40(4):426-30.
41. Kalapatapu RK, Vadhan NP, Rubin E, Bedi G, **Cheng WY**, Sullivan MA, Foltin RW. A pilot study of neurocognitive function in older and younger cocaine abusers and controls. *Am J Addict.* 2011 May-Jun;20(3):228-39.
42. Saroyan JM, **Cheng WY**, Taylor DC, Afzal A, Sonty N, Sullivan MA. Select practice behaviors of clinicians on the use of opioids for adolescents with subacute and chronic nonmalignant pain. *J Opioid Manag.* 2011 Mar-Apr;7(2):123-34.
43. Levin FR, Mariani JJ, Brooks DJ, Pavlicova M, **Cheng WY**, Nunes EV. Dronabinol for the treatment of cannabis dependence: a randomized, double-blind, placebo-controlled trial. *Drug Alcohol Depend.* 2011 Jul 1;116(1-3):142-50.
44. Bisaga A, Aharonovich E, **Cheng WY**, Levin FR, Mariani JJ, Raby WN, Nunes EV. A placebo-controlled trial of memantine for cocaine dependence with high-value voucher incentives during a pre-randomization lead-in period. *Drug Alcohol Depend.* 2010 Sep 1;111(1-2):97-104.
45. Mariani JJ, Horey J, Bisaga A, Aharonovich E, Raby W, **Cheng WY**, Nunes E, Levin FR. Antisocial behavioral syndromes in cocaine and cannabis dependence. *Am J Drug Alcohol Abuse.* 2008;34(4):405-14.

46. Mysels DJ, **Cheng WY**, Nunes EV, Sullivan MA. The association between naltrexone treatment and symptoms of depression in opioid-dependent patients. *Am J Drug Alcohol Abuse*. 2011 Jan;37(1):22-6.
47. Hootman JM, **Cheng WY**. Psychological distress and fair/poor health among adults with arthritis: state-specific prevalence and correlates of general health status, United States, 2007. *Int J Public Health*. 2009 Jun;54 Suppl 1:75-83.
48. Carpenter KM, McDowell D, Brooks DJ, **Cheng WY**, Levin FR. A preliminary trial: double-blind comparison of nefazodone, bupropion-SR, and placebo in the treatment of cannabis dependence. *Am J Addict*. 2009 Jan-Feb;18(1):53-64.
49. Levin FR, Mariani JJ, Secora A, Brooks D, **Cheng WY**, Bisaga A, Nunes E, Aharonovich E, Raby W, Hennessy G. Atomoxetine Treatment for Cocaine Abuse and Adult Attention-Deficit Hyperactivity Disorder (ADHD): A Preliminary Open Trial. *J Dual Diagn*. 2009 Jan 1;5(1):41-56.
50. Mariani JJ, Horey J, Bisaga A, Aharonovich E, Raby W, **Cheng WY**, Nunes E, Levin FR. Antisocial behavioral syndromes in cocaine and cannabis dependence. *Am J Drug Alcohol Abuse*. 2008;34(4):405-14.

INVITED LECTURES

“Effect Modification,” Epidemiologic Methods Seminar Series, Department of Epidemiology, Columbia University Mailman School of Public Health (2009-2010)

SELECTED HONORS AND AWARDS

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| 2021 | Silver Ribbon – Research Poster, Academy of Managed Care Pharmacy’s (AMCP’s) Annual Nexus Meeting |
| 2017 | Top 10% Ribbon – Research Poster, International Society for Pharmacoeconomics and Outcomes Research (ISPOR) Annual Meeting |
| 2012 | Finalist Ribbon – Research Poster, ISPOR Annual Meeting |
| 2008–2009 | Teagle Teaching Fellowship, Columbia University Graduate School of Arts and Sciences |

PROFESSIONAL ASSOCIATIONS AND MEMBERSHIPS

- | | |
|-----------|--|
| 2011–2023 | International Society for Pharmacoepidemiology |
| 2011–2023 | ISPOR |

JOURNAL PEER REVIEWER

Drugs – Real World Outcomes

The Journal of Pain

LANGUAGES

Cantonese (fluent), Mandarin (conversational)