

Curriculum Vitae
(updated on 09/14/2019)

Wei-Hsuan Jenny Lo-Ciganic, MSPharm, MS, PhD

Assistant Professor
Department of Pharmaceutical Outcomes & Policy, College of Pharmacy
University of Florida

BIOGRAPHICAL INFORMATION

Business Address: University of Florida,
College of Pharmacy,
P.O. Box 100495
1225 Center Drive
Gainesville, Florida 32610

E-mail: wlociganic@cop.ufl.edu

Business Phone: (352) 273-6255 Fax: (352) 273-6270

EDUCATION

Post-Graduate

2013-2014 University of Pittsburgh,
Center for Center on Pharmaceutical
Policy and Prescribing (CP3) Postdoctoral
Associate in
pharmaceutical health
service research

Graduate

2006-2013 University of Pittsburgh,
Graduate School of Public Health PhD, Epidemiology

Major field: Pharmacoepidemiology
Dissertation: Pharmacoepidemiologic Studies: An Interrupted-
Time Series Analysis on Drug Utilization and Evaluation of
Beneficial or Adverse Drug Effects
Major advisor: Janice Zgibor, RPh, PhD

2011-2013 University of Pittsburgh,
School of Medicine Geriatric
Pharmaceutical
Outcomes and Gero-
Informatics Research
and Training Program

Advisor: Joseph T Hanlon, PharmD, PhD

2008-2010 University of Pittsburgh,
Graduate School of Public Health M.S., Biostatistics

Major field: machine learning (classification tree)

Thesis: Identifying and Validating Type 1 and Type 2 Diabetic Cases Using Administrative Data: A Tree-Structured Model

Major advisor: Roslyn Stone, PhD

2003-2005 National Cheng Kung University
(Tainan, Taiwan) M.S., Clinical
Pharmacy

Major field: Clinical Pharmacy, nephrology

Thesis: Effect of Angiotensin Converting Enzyme Inhibitors and Angiotensin II Receptor Blockers on Protection of Cardiovascular Disease and Residual Renal Function in Peritoneal Dialysis Patients

Major advisor: Prof. Yea-Huei Kao Yang, RPh

Undergraduate

1998-2003 National Taiwan University
(Taipei, Taiwan) B.S., Pharmacy;
Minor in Horticulture

CHRONOLOGY OF EMPLOYMENT

Academic Appointments

Years	Appointment	Institution, location
2018-present	Assistant Professor	Department of Pharmaceutical Outcomes & Policy, and Center for Drug Evaluation and Safety (CoDES), College of Pharmacy, University of Florida, Gainesville, FL
2019-present	Faculty member	Center for Addiction Research & Education (CARE), University of Florida, Gainesville, FL
2015-present	Adjunct Research Faculty	University of Arizona Arthritis Center, University of Arizona, Tucson, AZ
2015-2018	Core Research Investigator	Center for Population Science & Discovery, University of Arizona, Tucson, AZ
2015-2018	Assistant Professor	Department of Pharmacy Practice and Science, College of Pharmacy, University of Arizona, Tucson, AZ

2015-2018	Assistant Professor (secondary appointment)	Department of Epidemiology and Biostatistics, College of Public Health, University of Arizona, Tucson, AZ
2011-2013	Data Manager	Center for Aging and Population Health, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA
2006-2011	Graduate Student Researcher	Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, Pittsburgh, PA
2004-2006	Research Associate	Institute of Clinical Pharmacy, National Cheng-Kung University, Tainan, Taiwan

Non-Academic Appointments

Years	Appointment	Institution, location
2003-2005	Clinical Pharmacist Fellow	National Cheng Kung University Hospital, Tainan, Taiwan
2002	Intern	Merck Sharp & Dohme (LA) Corp., Medical Department. Taipei, Taiwan
2002	Pharmacist intern	Shin-Hsin-Ho Community Pharmacy, Taichung, Taiwan

HONORS AND AWARDS

2019	2018 Best Reviewer , Pharmacoepidemiology and Drug Safety
2019	2018 Outstanding Reviewer , Annals of Internal Medicine
2017	Grant Mentoring and Career Development Program Awardee , U.S. Bone and Joint Initiative/Bone and Joint Canada Young Investigators Initiative (YII)
2017	2017 Best Podium Presentation Award , 2017 International Society of Pharmacoeconomics and Outcomes Research (ISPOR) 22 nd Annual Meeting, Boston, MA, USA
2017	2016 Outstanding Reviewer , Annals of Internal Medicine

- 2016 **2015 Best Reviewer**, Pharmacoeconomics and Drug Safety
- 2016 **2015 Outstanding Reviewer**, Annals of Internal Medicine
- 2015 **2015 Top 10 Addiction Article**,
American Society of Addiction Medicine (ASAM)
Article: Gordon AJ, **Lo-Ciganic W**, Cochran G, Gellad WF, Cathers T,
Kelley D, Donohue JM. Patterns of quality of buprenorphine opioid
agonist treatment in a large Medicaid program. J Addict Med 2015
9:470-7
- 2015 **2015 Poster Finalist Award**,
2015 International Society of Pharmacoeconomics and Outcomes
Research (ISPOR) 20th Annual Meeting, Philadelphia, PA, USA
- 2013 **Honorable Mention for the Erikson Foundation Award**,
American Public Health Association
- Article “Zgibor JC, Schlenk EA, Vater LB, Kola S, Vander Bilt J,
Woody SE, Jacob ME, **Lo-Ciganic W**, Brenckle A, Brandenstein J,
Kwoh CK, Boudreau R, Albert SM, Conroy MB, Newman AB.
Partnership Building and Implementation of and Integrated Healthy-
Aging Program”.
- 2012 **Graduate Student Honoree**,
Graduate School of Public Health, University of Pittsburgh. 2012
Graduation convocation
- 2011 **Best Thesis Award in the Department of Biostatistics**,
Graduate School of Public Health, University of Pittsburgh. Honored
by the Omicron Chapter of the Delta Omega National Honor Society
of Public Health
- Thesis: “Identifying and Validating Type 1 and Type 2 Diabetic Cases
using Administrative Data: A Tree Structured Model”
- 2007 **Public Health Dean’s Scholarship**,
Graduate School of Public Health, University of Pittsburgh
- 2005 **Best Clinical Thesis Award**, Taiwan Society of Nephrology 2005
Annual Meeting, Taipei, Taiwan
- Thesis: “Cardiovascular Disease and Residual Renal Function in
Peritoneal Dialysis Patients: Protective Roles of Angiotensin-
Converting Enzyme Inhibitors and Angiotensin II Receptor Blockers”

MEMBERSHIPS IN PROFESSIONAL AND SCIENTIFIC SOCIETIES

2015-present	American Association of Colleges of Pharmacy (AACCP)
2015-present	International Society of Pharmacoepidemiology (ISPE)
2015-present	American College of Rheumatology (ACR)-Association of Rheumatology Health Professionals (ARHP)
2013-present	International Society of Pharmaceutical and Outcome Research (ISPOR)
2016-2018	Academy Health
2012-2013	Gerontology Society of America (GSA)
2005-2006, 2013	American College of Clinical Pharmacy (ACCP)

SERVICE AND OUTREACH

National and International

Years	Role	Committee	Organization
2018-present	Member	Quality Metrics Expert Panel (QMEP)	Pharmacy Quality Alliance (PQA)
2017-2018	Co-Chair	Stakeholder Advisory Panel C Co-Chair: Measurements of "Inappropriate Duplicate Therapy", "Adult Immunization" and "Polypharmacy"	PQA
2017-2018	Member	PQA Measure Validity Panel (MVP)	PQA
2016-2017	Member	Opioid and Pain Management Expert Panel	National Committee for Quality Assurance (NCQA)
2016	Member	Measurement Development Team 10: "Treatment of Chronic Hepatitis C: Completion of Therapy"	PQA
2015	Member	Measurement Development Team 7: "Triple Threat: Concurrent Use of Opioids,	PQA

Benzodiazepine or Nonbenzodiazepine
Sedative/Hypnotics, and Muscle
Relaxants”

National/International Study Section or External Grant Review Committee

Years	Role	Committee	Organization
2/14/2019- 2/15/2019	Member	Social Sciences and Population Studies B (SSPB) Study Section; Population Sciences and Epidemiology Integrated Review Group	National Institute of Health (NIH), Center for Scientific Review (CSR)
11/19/2018- 11/20/2018	Member	ZRG1 RPHB-Z 10 B Study Section, Small Business: Disease Prevention and Management, Risk Reduction and Health Behavior Change	NIH, CSR Special Emphasis Panel
2017	External Panel Reviewer	UNC Inter-institutional Planning Grant Program, Machine Learning Panel	American Association for the Advancement of Science (AAAS)

University Committees

Years	Role	Committee	Organization
2017	Grant Reviewer	Faculty Seed Grant	University of Arizona

College Committees

Years	Role	Committee	Organization
2019-present	Member	International Committee	University of Florida, College of Pharmacy
2016-2018	Member	Research Affairs Committee	University of Arizona, College of Pharmacy

Departmental Committees

Years	Role	Committee	Organization
2017-2018	Member	Department of Pharmacy, Practice and Science Peer Review Committee	University of Arizona, College of Pharmacy

2015-2016	Member	Department of Pharmacy, Practice and Science Mission, Vision, and Planning (MVP) Committee	University of Arizona, College of Pharmacy
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Conferences Review Committees

Years	Role	Committee	Organization
2019	Reviewer	Abstract reviewer for the annual conference	International Society of Pharmacoepidemiology (ISPE)
2019 (February)	Judge	Poster presentation (addition) judge for the annual research showcase	University of Florida, College of Pharmacy
2018	Reviewer	Abstract reviewer for the annual conference	American College of Rheumatology (ACR)- Association of Rheumatology Health Professionals (ARHP)
2018	Judge	Podium presentation (cardiovascular disease) judge for the annual conference	International Society of Pharmaco--economics and Outcomes Research (ISPOR)
2017	Judge	Podium presentations (Diabetes section) judge for the annual conference	ISPOR
2016	Judge	Podium presentations (cardiovascular disease/adherence) judge for the annual conference	ISPOR
2015	Reviewer	Abstract Review Committee for the Annual conference, epidemiology and methodology section	ISPOR

Ad-hoc Reviewer for the following journals, by alphabetical order (total articles reviewed to date):

2018-present	Addiction	(1)
2015-present	Annals of Internal Medicine	(6)
2018-present	American Journal of Cardiovascular Drug	(1)

2016-present	CNS Drug	(1)
2017-present	JAMA Internal Medicine	(2)
2016-present	Journal of General Internal Medicine	(2)
2011-present	Journal Diabetes Science Technology	(1)
2016-present	Medical Care	(1)
2019-present	Osteoarthritis and Cartilage	(1)
2015-present	Pharmacoepidemiology and Drug Safety	(4)
2018-present	Research in Social and Administrative Pharmacy	(1)
2018-present	Transaction on Management Information System	(1)

PUBLICATIONS

Google Scholar: <https://scholar.google.com/citations?user=rHTPVzMAAAAJ&hl=en&oi=ao>

*Keys to indicate author relationship: self=**bold**; senior/corresponding author =underline; fellow =*f*; graduate student =*g*; post-doctoral associate/fellow =*p*; resident =*r**

Referred Journal Articles, Published

(statistics regarding impact factor and cited by others was updated on September, 2019)

1. Dawwas GK_(g), Smith S, Dietrich E, **Lo-Ciganic W**, Park H. Comparative effectiveness and safety of apixaban compared to warfarin in patients with venous thromboembolism. Am J Health-Syst P. (in press; **Impact factor: 1.97; Cited by N/A; Altmetric score: Not Available**)
2. Wei Y-J, Chen C_(g), Schmidt SO, **Lo-Ciganic W**, Winterstein AG. Trends in prior receipt of prescription opioid or adjuvant analgesics among patients with incident opioid use disorder or opioid-related overdose. Drug Alcohol Depend. (in press; **Impact factor: 3.47; Cited by N/A; Altmetric score: Not Available**)
3. Metes ID_(g), Xue L, Chang CH, Huskamp HA, Gellad WF, Zhang R, **Lo-Ciganic W**, Choudhry NK, Richards-Shubik S, Guclu H, Donohue JM. Association between physician adoption of a new oral antidiabetic medication and Medicare and Medicaid drug spending. BMC Health Serv Res. (in press; **Impact factor: 2.76; Cited by N/A; Altmetric score: Not Available**)
4. Zhou L_(g), Kwok CK, Ran D, Ashbeck EL, **Lo-Ciganic W**. Lack of evidence that beta blocker use reduces knee pain, areas of joint pain, or analgesic use among individuals

- with symptomatic knee osteoarthritis. *Osteoarthr Cartil.* 2019; DOI: 10.1016/j.joca.2019.08.008 (in press; **Impact factor: 5.45; Cited by 0; Altmetric score: Not Available**)
5. Lobo C^(g), Cochran G, Chang, C-C, Gellad WF, Gordon AG, Jalal H, **Lo-Ciganic W**, Karp JF, David K, Donohue JM. Associations between the specialty of opioid prescribers and opioid addiction, misuse and overdose outcomes. *Pain Med.* (in press; **Impact factor: 2.78; Cited by 0; Altmetric score: Not Available**)
 6. Bhattacharjee S, Patanwala AE, **Lo-Ciganic W**, Malone DC, Lee JK, Knapp SM, Warholak T, Burke, WJ. Alzheimer's disease medication and risk of all-cause mortality and all-cause hospitalization: a retrospective cohort study. *Alzheimer's & Dementia: Translational Research & Clinical Interventions* 2019; 10;5:294-302. PMID: 31338414. PMCID: PMC6626065. DOI: 10.1016/j.trci.2019.05.005 (**Impact factor: 2.85; Cited by 0; Altmetric score: 13**)
 7. **Lo-Ciganic W**, Huang JL, Zhang HH, Weiss JC, Wu Y, Kwoh CK, Donohue JM, Cochran G, Gordon AJ, Malone DC, Kuza CC, Gellad WF. Evaluation of machine-learning algorithms for predicting opioid overdose risk among Medicare beneficiaries with opioid prescription. *JAMA Netw Open* 2019; 2(3):e190968. PMID: 30901048. PMCID: PMC6646083. DOI:10.1001/jamanetworkopen.2019.0968. (**Impact factor: not available; Cited by 0; Altmetric score: 133**).
 8. Bhattacharjee S, Lee JK, Patanwala AE, Vadiiei N, Malone DC, Knapp S, **Lo-Ciganic W**, Burke WJ. Extent and predictors of potentially inappropriate antidepressant use among older adults with dementia and major depressive disorder. *Am J Geriatr Psych* 2019; 27(8):794-805. PMID: 30926273. DOI:10.1016/j.jagp.2019.02.002. (**Impact factor: 3.48; Cited by 1; Altmetric score: 1**).
 9. Donohue JM, Kennedy J, Seymour CW, Girard TD, **Lo-Ciganic W**, Kim CH, Marroquin OC, Moyo P, Chang C-H, Angus DC. Patterns of opioid administration among opioid-naïve inpatients and associations with postdischarge opioid use: A cohort study. *Ann Intern Med* 2019. PMID: 31207646. DOI: 10.7326/M18-2864. (**Impact factor: 19.32; Cited by 1; Altmetric score: 211**).
 10. **Lo-Ciganic W**, Donohue JM, Kim JY, Krans EE, Jones B, Kelley D, James E, Jarlenski M. Adherence trajectories of buprenorphine therapy among pregnant women in a large state Medicaid program in the United States. *Pharmacoepidemiol Drug Saf* 2019; 28(1):80-89. PMID: 30192041. DOI: 10.1002/pds.4647. (**Impact factor: 2.47; Cited by: 1; Altmetric score: 4**)
 11. Donohue JM, Guclu H, Gellad WF, Chang CH, Huskamp HA, Choudhry NK, Zhang R, **Lo-Ciganic W**, Junker SP, Anderson T, Richards-Shubik S. Influence of peer networks on physician adoption of new drugs. *PLoS One* 2018; 13(10):e0204826. PMID: 30273368. PMCID: PMC6166964. DOI: 10.1371/journal.pone.0204826. (**Impact factor: 2.77; Cited by: 2; Altmetric score: 22**).

12. Cochran G, **Lo-Ciganic W**, Gellad WF, Gordon AJ, Cole E, Chang C, Lobo C, Frazier W, Zheng P, Chang C-C, Kelley D, Donohue JM. Prescription opioid quality measures applied among Pennsylvania Medicaid enrollees. *J Manag Care Spec Pharm*. 2018; 24(9):875-885. PMID: 30156454. PMCID: PMC6418411. DOI:10.18553/jmcp.2018.24.9.875. **(Impact factor: 2.7; Cited by: 1; Altmetric score: 6)**.
13. Anderson TS, **Lo-Ciganic W**, Gellad WF, Zhang R, Huskamp HA, Choudhry NK, Chang C-H, Richards-Shubik S, Guclu H, Donohue JM. Patterns and predictors of physician adoption of new cardiovascular drugs. *Healthc (Amst)*. 2018; 6(1):33-40. PMID: 29066168. PMCID: PMC5910251. DOI: 10.1016/j.hjdsi.2017.09.004. **(Impact factor: Not Available; Cited by: 1; Altmetric score: 2)**.
14. Hill MG, Gonzalez MG_(p), **Lo-Ciganic W**, Reed KL. Misoprostol in addition to a double balloon catheter for induction: A double-blind randomized controlled trial. *Am J Perinatol*. 2018.35(3):225-232 PMID: 28910848. DOI: 10.1055/s-0037-1606606. **(Impact factor: 1.95; Cited by: 1; Altmetric score: 13)**.
15. Frazier W, Cochran G, **Lo-Ciganic W**, Gellad WF, Gordon AJ, Chang CC, Donohue JM. Medication-assisted treatment and opioid use before and after overdose in Pennsylvania Medicaid. *JAMA* 2017; 318(8):750-752. PMID: 28829862. PMCID: PMC5817478. DOI: 10.1001/jama.2017.7818. **(Impact factor: 47.66; Cited by: 21; Altmetric score: 321)**.
16. Cochran G, Gordon AJ, Gellad WF, Chang C-C, **Lo-Ciganic W**, Lobo C_(g), Cole E, Frazier W, Zheng P, Kelley D, Donohue JM. Medicaid prior authorization and opioid medication abuse and overdose. *Am J Manag Care*. 2017; 23(5):e164-e171. PMID: 28810127. **(Impact factor: 1.32; Cited by: 7; Altmetric score: Not Available)**.
17. Almutairi A_(g), Zhou L_(g), Gellad WF, Lee JK, Slack M, Martin JR, **Lo-Ciganic W**. Effectiveness and safety of non-Vitamin K antiagonist oral anticoagulants for atrial fibrillation and venous thromboembolism: a systematic review and meta-analyses. *Clin Ther* 2017; 39(7):1456-1478. PMID: 28668628. DOI:10.1016/j.clinthera.2017.05.358. **(Impact factor: 2.95; Cited by: 31; Altmetric score: 3)**.
18. **Lo-Ciganic W**, Floden L, Lee JK, Ashbeck EL, Zhou L_(g), Chinthammit C_(g), Purdy AW, Kwok CK. Analgesic use and risk of recurrent falls in patients with or at risk of knee osteoarthritis: data from the Osteoarthritis Initiative. *Osteoarthr Cartil* 2017; 25(9):1390-1398. PMID: 28385483. PMCID: PMC5989560. DOI: 10.1016/j.joca.2017.03.017. **(Impact factor: 5.45; Cited by: 7; Altmetric score: 46)**.

19. Cochran G, Gordon AJ, **Lo-Ciganic W**, Gellad WF, Frazier W, Lobo C_(g), Zheng P, Donohue JM. An examination of claims-based predictors of overdose from a large Medicaid program. *Med Care*. 2017; 55(3):291-298. PMID: 27984346. PMCID: PMC5309160. DOI: 10.1097/MLR.0000000000000676. **(Impact factor: 3.34; Cited by: 19; Altmetric score: 7).**
20. **Lo-Ciganic W**, Donohue JM, Jones BL, Perera S, Thorpe JM, Thorpe CT, Marcum ZA, Gellad WF. Trajectories of diabetes medication adherence and hospitalization risk: A retrospective cohort study in a large state Medicaid program. *J Gen Intern Med*. 2016; 31(9):1052-1060. PMID: 27229000. PMCID: PMC4978686. DOI: 10.1007/s11606-016-3747-6. **(Impact factor: 3.70; Cited by: 12; Altmetric score: Not Available).**
21. Gordon AJ, **Lo-Ciganic W**, Cochran G, Gellad WF, Cathers T, Donohue JM. Treatment quality for buprenorphine care: The pot at the end of the rainbow. [In Reply to "Measurement Quality of Buprenorphine Care"]. *J Addict Med*. 2016; 10(3):210-211. PMID: 27223837. DOI: 10.1097/ADM.0000000000000210. **(Impact factor: 2.41; Cited by: 2; Altmetric score: 4).**
22. **Lo-Ciganic W**, Gellad WF, Huskamp HA, Choudhry NK, Chang CH, Zhang R, Jones BL, Guclu H, Richards-Shubik S, Donohue JM. Who were the early adopters of dabigatran? An application of group-based trajectory models. *Med Care* 2016; 54(7):725-732. PMID: 27116109. PMCID: PMC4907845. DOI: 10.1097/MLR.0000000000000549. **(Impact factor: 3.34; Cited by: 11; Altmetric score: 23).**
23. Zgibor JC, Schlenk EA, Vater LB, Kola S, Vander Bilt J, Woody SE, Jacob ME, **Lo-Ciganic W**, Brenckle A, Brandenstein J, Kwok CK, Boudreau R, Albert SM, Conroy MB, Rodger E, Newman AB. Partnership building and implementation of an integrated healthy-aging program. *Prog Community Health Partnersh*. 2016; 10(1): 123-132. PMID: 27018361. PMCID: PMC5988248. DOI: 10.1353/cpr.2016.0001. **(Impact factor: 1.06; Cited by: 9; Altmetric score: 1).**
24. Jacob ME, **Lo-Ciganic W**, Schlenk EA, Terhost L, Vander Bilt J, Zgibor JC, Simkin-Silverman L, Albert SM, Newman AB. The preventive services use self-efficacy (PRESS) scale in older women: development and psychometric properties. *BMC Health Serv Res* 2016; 16(1):71. PMID: 26897364. PMCID: PMC4761175. DOI: 10.1186/s12913-016-1321-x. **(Impact factor: 2.76; Cited by: 4; Altmetric score: Not Available).**
25. **Lo-Ciganic W**, Gellad WF, Gordon AJ, Cochran G, Zemaitis MA, Donohue JM. Association between trajectories of buprenorphine treatment and emergency department and in-patient utilization. *Addiction* 2016; 111(5):892-902. PMID: 26662858. DOI: 10.1111/add.13270. **(Impact factor: 6.85; Cited by: 19; Altmetric score: 12).**

26. Schlenk EA, Vander Bilt J, **Lo-Ciganic W**, Jacob ME_(g), Woody SE, Zgibor JC, Conroy MB, Kwok CK, Albert SM, Bayles CM, Simkin-Silverman L, Boudreau R, Newman AB. Pilot enhancement of the Arthritis Foundation exercise program with a healthy aging program. *Res Gerontol Nurs*. 2016; 9(3):123-132. PMID: 26501346. PMCID: PMC5861714 DOI: 10.3928/19404921-20151019-04. **(Impact factor: 0.86; Cited by: 2; Altmetric score: 3).**
27. Gordon AJ, **Lo-Ciganic W**, Cochran G, Gellad WF, Cathers T, Kelley D, Donohue JM. Patterns and quality of buprenorphine opioid agonist treatment in a large Medicaid program. *J Addict Med* 2015; 9(6):470-7. PMID: 26517324. DOI:10.1097/ADM.000000000000164. **(Impact factor: 2.41; Cited by: 19; Altmetric score: 18).**
28. Minlikeeva A_(g), Freudenheim JL, **Lo-Ciganic W**, Eng KH, Friel GL, Diergaarde B, Modugno F, Cannioto RA, Gower E, Szender JB, Grzankowski K, Odunsi K, Ness RB, Moysich KB. Use of common analgesics is not associated with ovarian cancer survival. *Cancer Epidemiol Biomarkers Prev*. 2015; 24(8):1291-1294. PMID: 26063476. PMCID: PMC4526413. DOI: 10.1158/1055-9965.EPI-15-0508. **(Impact factor: 4.13; Cited by: 6; Altmetric score: 1).**
29. **Lo-Ciganic W**, Donohue JM, Thorpe JM, Perera S, Thorpe CT, Marcum ZA, Gellad WF. Using machine learning to examine medication adherence thresholds and risk of hospitalization. *Med Care*. 2015; 53(8):720-728. PMID: 26147866. PMCID: PMC4503478. DOI:10.1097/MLR.0000000000000394. **(Impact factor: 3.34; Cited by: 23; Altmetric score: 7).**
30. Cochran G, Woo B, **Lo-Ciganic W**, Gordon AJ, Donohue JM, Gellad WF. Defining non-medical use of prescription opioids within health care claims: a systematic review. *Subst Abus*. 2015; 36(2):192-202. PMID: 25671499. PMCID: PMC4736503. DOI: 10.1080/08897077.2014.993491. **(Impact factor: 2.67; Cited by: 20; Altmetric score: 1).**
31. **Lo-Ciganic W**, Perera S, Gray SL, Boudreau RM, Zgibor JC, Strotmeyer ES, Donohue JM, Bunker CH, Newman AB, Simonsick EM, Bauer DC, Satterfield S, Caserotti P, Harris T, Shorr RI, Hanlon JT. Statin use and decline in gait speed in community-dwelling older adults. *J Am Geriatr Soc* 2015; 63(1):124-129. PMID: 25537649. PMCID: PMC4300263. DOI: 10.1111/jgs.13134. **(Impact factor: 3.48; Cited by: 7; Altmetric score: 3).**
32. Trabert B, Ness RB, **Lo-Ciganic W**, Murphy MA, Goode EL, Poole EM, Brinton LA, Webb PM, Nagel CM, Jordan SJ, Risch HA, Rossing MA, Doherty JA, Goodman MT, Lurie G, Kier SK, Hogdall E, Jensen A, Cramer DW, Terry KL, Vitonis A, Bandera EV, Olson S, King MG, Chandran U, Anon-Culver H, Ziogas A, Menon U, Gayther SA, Ramus, SJ, Gentry-Maharai A, Wu AH, Pearce CL, Pike MC, Berchuck A,

- Schildkraut JM, Wentzensen NW. Aspirin, non-aspirin nonsteroidal anti-inflammatory drug, and acetaminophen use and risk of invasive epithelial ovarian cancer: a pooled analysis in the Ovarian Cancer Association Consortium. *J Natl Cancer Inst.* 2014;106(2): djt43. PMID: 24503200. PMCID: PMC3924755. DOI: 10.1093/jnci/djt431. **(Impact factor: 5.92; Cited by: 143; Altmetric score: 203).**
33. Terry KL, Karageorgi S, Shyestoy YB, Merritt MA, Vitonis AF, Lurie G, Thompson PJ, Carney ME, Weber RP, Akushevick L, **Lo-Ciganic W**, Cushing-Haugen K, Sieh W, Moysich K, Doherty JA, Nagle CM, Australian Cancer Study (Ovarian Cancer), Australian Ovarian Cancer Study Group, Berchuck A, Pearce CL, Pike M, Ness RB, Webb PM, Rossing MA, Schildkraut J, Risch H, Goodman MT on behalf of the Ovarian Cancer Association Consortium. Genital powder use and risk of ovarian cancer: a pooled analysis of 8,525 cases and 9,859 controls. *Cancer Prev Res.* 2013 6(8): 811-821. PMID: 23761272. PMCID: PMC3766843. DOI: 10.1158/1940-6027.CAPR-13-0037. **(Impact factor: 4.44; Cited by: 59; Altmetric score: 305).**
34. **Lo-Ciganic W**, Boudreau RM, Gray SL, Zgibor JC, Donohue JM, Perera S, Newman AB, Simonsick EM, Bauer DC, Satterfield S, Hanlon JT for the Health ABC Study. Changes in cholesterol-lowering medications use over a decade in community-dwelling older adults. *Ann Pharmacother.* 2013 47(7-8): 984-992. PMID: 23780807. PMCID: PMC3707940 DOI: 10.1345/aph.1S050. **(Impact factor: 3.16; Cited by: 16; Altmetric score: 1).**
35. **Lo-Ciganic W**, Zgibor JC, Bunker CH, Moysich KB, Edwards RP, Ness RB. Aspirin, non-aspirin nonsteroidal anti-inflammatory drugs, or acetaminophen and risk of ovarian cancer. *Epidemiology* 2012; 23(2):311-319. PMID: 22252409. PMCID: PMC3454462. DOI: 10.1097/EDE.0b013e3182456ad3. **(Impact factor: 5.23; Cited by: 48; Altmetric score: 12).**
36. **Lo-Ciganic W**, Zgibor JC, Ruppert K, Arena V, and Stone RA. Identifying type 1 and type 2 diabetic cases using administrative data: a tree-structured model. *J Diabetes Sci Technol* 2011; 5(3):486-493. PMID: 21722564. PMCID: PMC3192615. DOI: 10.1177/193229681100500303. **(Impact factor: 2.65; Cited by: 22; Altmetric score: Not Available).**
37. **Lo W**, Kao Yang YH, and Sung JM. Antihypertensive agents and new-onset diabetes. *Kidney and Dialysis* 2004; 16:225-240. (Chinese).
38. **Lo W**, Li YH, and Lin CY. Selective serotonin reuptake inhibitors (SSRI). *National Cheng Kung University Pharmacy Forum* 2004; 14 (6). (Chinese).

Reviews, Reports, Proceedings, Books and Book Chapters

1. **Lo-Ciganic W**, Donohue JM, Cole E, Gellad WF. Report on characteristics of Pennsylvania Medicaid beneficiaries receiving new oral direct antiviral agents for hepatitis C infections: 2013-2015. Report to the Office of Medical Assistance Programs in the Pennsylvania Department of Human Services. The Medicaid Research Center, University of Pittsburgh, PA. April 2017.
2. **Lo-Ciganic W**, Donohue JM, Kim JY, Krans EE, Cole E, Jarlenski M. Report on adherence trajectories of buprenorphine therapy among pregnant women: 2008-2015. Report to the Office of Medical Assistance Programs in the Pennsylvania Department of Human Services. The Medicaid Research Center, University of Pittsburgh, PA. April 2017.
3. Donohue JM, Cole E, Kim J-Y, Zheng P, **Lo-Ciganic W**, Gordon AJ, Gellad WF, Cochran G. Report of opioid prescribing quality measures, opioid use, opioid use disorder and medication-assisted treatment in Pennsylvania Medicaid. Report to the Office of Medical Assistance Programs in the Pennsylvania Department of Human Services. The Medicaid Research Center, University of Pittsburgh, PA. March 2017.
4. **Lo-Ciganic W**, Humble W, Roubal A, Wightman P, Butler M, Calhoun E. Emergency department and inpatient visits for substance use disorders in Arizona. 2015 The University of Arizona Health Sciences Center Policy Briefs Vol 1. https://pophealth.uahs.arizona.edu/sites/default/files/uploads/issue_brief_vol_1_issue_1.pdf (Access Date: 11/29/2017)
5. Donohue JM, **Lo-Ciganic W**, Cochran G, Gordon AJ, Zemaitis MA, Gellad WF. Report on opioid use, opioid use disorder and buprenorphine use in Pennsylvania Medicaid. Report to the Department of Public Welfare, Office of Medical Assistance Programs, March 2014.
6. Kuller L, **Lo-Ciganic W**, Buchanich J, Sharma R. Report of the Allegheny County Mortality and Health Improvement Project: Analysis of mortality data and recommendations. Department of Epidemiology, Graduate School of Public Health, University of Pittsburgh, PA, March 2012.

Referred Podium Presentation

*Keys to indicate author relationship: self=**bold**; presenting author =underline; fellow =*f*; graduate student =*g*; post-doctoral associate/fellow =*p*; resident =*r**

1. Goodin AJ, Huang JL, Park H, Hincapie-Castillo JM, Brown JD, Costales B_(g), **Lo-Ciganic W**. Change in Buprenorphine Prescriptions for Opioid Use Disorder Indications in Arizona from 2011-2016. 2019 Addiction Health Services Research (AHSR), Salt Lake City, Utah, USA, October 16-18, 2019.

2. Marcum ZA, Chang C-Y^(g), **Lo-Ciganic W**. Association between pharmaceutical industry payments and prescribing a fixed-dose combination memantine extended released and donepezil: a cross-sectional study. Poster Spotlight presentation at the 2019 Asian Conference on Pharmacoepidemiology [ACPE], Kyoto, Japan, October 11-13, 2019.
3. Tan T, Zhou L^(g), Bell M, **Lo-Ciganic W**. “Racial minorities were associated with less prescription opioids use following lower extremity amputation in Medicare”. 2019 4th Society of Asian Academic Surgeons (SAAS) annual meeting, Boston, MA, USA, September 26-27, 2019. (Quickshots presentation)
4. Yao R, Li Q, **Lo-Ciganic W**, Zeng D. “A prior knowledge based neural attention model for opioid topic identification”. 2019 IEEE International Conference on Intelligence and Security Informatics (ISI) 17th annual conference. Shenzhen, China. July 1-3, 2019.
5. Zhou L^(g), Bhattacharjee S, Kwoh CK, Tighe PJ, Reisfield GM, Malone DC, Slack M. **Lo-Ciganic W**. “Dual-trajectories of opioid and gabapentinoid use and risk of subsequent drug overdose among United States Medicare beneficiaries”. 2019 ICPE 35th annual conference, Pennsylvania, PA, USA, August 24-28, 2019.
6. **Lo-Ciganic W**, Huang JL, Zhang HH, Weiss JC, Wu Y, Kwoh CK, Donohue JM, Cochran G, Gordon AJ, Malone DC, Kuza CC, Gellad WF. “Using machine learning to predict risk of opioid overdose in fee-for-service Medicare”. 2019 ICPE 35th annual conference, Philadelphia, PA, USA, August 24-28, 2019.
7. Zhou L^(g), Bhattacharjee S, Kwoh CK, Tighe PJ, Reisfield GM, Malone DC, Slack M. **Lo-Ciganic W**. “Dual-trajectories of opioid and gabapentinoid use and risk of subsequent drug overdose among United States Medicare beneficiaries”. 2019 ISPOR 24rd annual International Meeting, New Orleans, LA, USA, May 18-22, 2019.
 - Student presentation spotlight (only 8 students were selected).
8. Yao R, Li Q, Zeng DD, **Lo-Ciganic W**. “Identifying topics of opioid use discussion using an unsupervised neural attention model”. 2018 Institute of Electrical and Electronics Engineers (IEEE) Intelligence and Security Informatics (ISI), Miami, FL USA, November 8-10, 2018.
9. **Lo-Ciganic W**, Kwoh CK, Huang JL, Zhang H, Donohue JM, Gordon AJ, Malone DC, Cochran G, Gellad WF. “Using machine learning to predict risk of opioid overdose in fee-for-service Medicare”. 2018 Addiction Health Service Research (AHSR) Annual Conference, Savannah, GA USA, October 17-19, 2018.

10. **Lo-Ciganic W**, Gellad WF, Zhou L^(g), Donohue JM, Roubal A, Hines L, Lindemann J, Malone DC, Bhattacharjee S, Lee JK, Kwoh CK. "Geographic variation of high-risk opioid use and risk of overdose among disabled Medicare beneficiaries in the US from 2011-2015". 2018 34th ICPE annual conference, Prague, Czech Republic, August 22-26, 2018.
11. **Lo-Ciganic W**, Gellad WF, Zhou L, Donohue JM, Roubal A, Hines L, Lindemann J, Malone DC, Bhattacharjee S, Lee JK, Kwoh CK. "Geographic variation of high-risk opioid use and risk of overdose among disabled Medicare beneficiaries in the US from 2011-2015". 2018 ISPOR 23nd Annual International Meeting, Baltimore, MA USA, May 19-23, 2018.
12. Chien H-C^(p), **Lo-Ciganic W**, Kwoh CK, Kao-Yang Y-H. "Use of Aromatase Inhibitors and Risk of Arthralgia among Taiwanese Breast Cancer Women: A Nation-Wide Claims Analysis". 2017 American College of Rheumatology (ACR) Annual Conference, San Diego, CA, USA, November 3-8, 2017.
13. Sudano DG, Kowh CK, Zhou L^(g), Ashbeck EL, **Lo-Ciganic W**. "Use of disease-modifying anti-rheumatic drugs, biologic response modifiers and corticosteroids, and subsequent risk of coccidioidomycosis infection among Medicare beneficiaries". 2017 American College of Rheumatology (ACR) Annual Conference, San Diego, CA, USA, November 3-8, 2017.
14. **Lo-Ciganic W**, Donohue JM, Kim JY, Krans EE, Kelley D, James E, Jarlenski M. "Trajectories of buprenorphine opioid agonist therapy during pregnancy in a large Medicaid program". 2017 International Conference on Pharmacoepidemiology and Therapeutic Risk Management (ICPE), Montreal, Canada, August 26-30, 2017.
15. Cochran G, Gordon AJ, Gellad WF, Chang C, **Lo-Ciganic W**, Lobo C^(g), Cole E, Frazier W, Zheng P, Kelley D, Donohue JM. "The influence of prior authorization policies on opioid medication abuse and overdose among members of a large Medicaid program". 2017 College on Problems of Drug Dependence (CPDD), Montreal, Canada, June 17-22, 2017.
16. Zhou L^(g), Kwoh CK, Gellad WF, Donohue JM, Roubal A, Hines L, Malone DC, Bhattacharjee S, Lee JK, Lindemann J, Bell M, Westra J^(g), **Lo-Ciganic W**. "Geographic variation of inappropriate prescription opioid use among disabled Medicare beneficiaries". 2017 International Society for Pharmacoeconomics and Outcomes Research (ISPOR) 22nd Annual International Meeting, Boston, MA, USA, 20-24, May 2017.

17. **Lo-Ciganic W**, Donohue JM, Jones BL, Perera S, Thorpe JM, Thorpe CT, Marcum ZA, Gellad WF. “Trajectories of diabetes medication adherence and hospitalization risk”. 2015 International Conference on Pharmacoepidemiology and Therapeutic & Risk Management (ICPE), Dublin, Ireland, August 25-28, 2016 (**Poster Spotlight Presentation**).
18. **Lo-Ciganic W**, Donohue JM, Thorpe JM, Perera S, Thorpe CT, Marcum ZA, Gellad WF. “Using machine learning to examine medication adherence thresholds and risk of hospitalization”. 2015 International Conference on Pharmacoepidemiology and Therapeutic & Risk Management, Boston, MA, August 22-26, 2015.
19. **Lo-Ciganic W**, Gellad WF, Gordon AJ, Cochran G, Donohue JM. “Trajectories of buprenorphine treatment and associated emergency department and inpatient use in a large Medicaid program” 2015 International Conference on Pharmacoepidemiology and Therapeutic & Risk Management (ICPE), Boston, MA, August 22-26, 2015.
20. **Lo-Ciganic W**, Donohue JM, Thorpe JM, Perera S, Thorpe CT, Marcum ZA, Gellad WF. “Using machine learning to examine medication adherence thresholds and risk of hospitalization”. 2015 Conference on the Science of Medication Adherence, Pittsburgh, PA June 13, 2014.
21. **Lo-Ciganic W**, Gellad WF, Gordon AJ, Cochran G, Donohue JM. “Trajectories of buprenorphine treatment and associated emergency department and inpatient use in a large Medicaid program”. 2015 Conference on the Science of Medication Adherence, Pittsburgh, PA June 13, 2014.
22. **Cochran G**, Woo B, Donohue JM, Gordon AJ, **Lo-Ciganic W**, Gellad WF. “Defining non-medical use of prescription opioids within health insurance claims data: a systematic review”. 2014 Association for Medical Education and Research in Substance Abuse (AMERSA) National Conference, San Francisco, CA, USA, November 6-8, 2014.
23. **Schlenk EA**, Vander Bilt J, **Lo-Ciganic W**, Woody SE, Zgibor JC, Conroy MB, Kwoh CK, Newman AB. “Integration of a healthy aging program into the Arthritis Foundation Exercise Program: six-month results”. American College of Rheumatology (ACR)/Association of Rheumatology Health Professionals (AHRP) Annual Scientific Meeting, Washington, D.C., USA, November 9-14, 2012.
24. **Vander Bilt J**, **Lo-Ciganic W**, Woody SE, Zgibor JC, Conroy MB, Schlenk EA, Newman AB. “Integrating a healthy prevention program into a collaborative framework in community-based research”. 2012 the 140th American Public Health Association (APHA) Annual Meeting, San Francisco, California, USA, October 27-31, 2012 (**Round Table Presentation**).

25. Zgibor JC, **Lo-Ciganic W**, Wolf D. "Implementing the chronic care model in primary care: impacting outcomes of care". Center for Disease Control Conference, 2011.
26. **Lo W**, Huang JJ, Kao Yang YH, Guo HR, Kao SM, and Wang MC. "Cardiovascular disease and residual renal function in peritoneal dialysis patients: protective roles of angiotensin-converting enzyme inhibitors and angiotensin II receptor blockers". Taiwan Nephrology 2005 Annual Meeting, Taipei, Taiwan, December 15, 2005.
27. **Lo W**, Wang MC, Kao SM, and Kao Yang YH. "Effects of angiotensin converting enzyme inhibitors and angiotensin II receptor blockers on protection of cardiovascular disease in peritoneal dialysis patients". American College of Clinical Pharmacy 2005 Annual Meeting, San Francisco, California, USA, October 23-26, 2005.

Peer-reviewed Abstracts (Published) with Conference Presentations

*Keys to indicate author relationship: self=**bold**; presenting author =underline; fellow =f; graduate student =g; post-doctoral associate/fellow =p; resident =r*

1. Marcum ZA, Chang C-Y_(g), **Lo-Ciganic W**. Association between pharmaceutical industry payments and prescribing a fixed-dose combination memantine extended released and donepezil: a cross-sectional study. *Pharmacoepidemiol Drug Saf* 2019 (in press). (Poster Spotlight presentation at the 2019 Asian Conference on Pharmacoepidemiology [ACPE], Kyoto, Japan, October 11-13, 2019).
2. Goodin AJ, Huang JL, Park H, Hincapie-Castillo JM, Brown JD, Costales B_(g), **Lo-Ciganic W**. Trends in controlled substance utilization in Arizona from 2011-2016, by Prescription Class. *2019 Subst Abus* 2019 (in press). (Poster presentation at the 2019 Addiction Health Services Research (AHSR), Salt Lake City, Utah, USA, October 16-18, 2019).
3. Goodin AJ, Huang JL, Park H, Hincapie-Castillo JM, Brown JD, Costales B_(g), **Lo-Ciganic W**. Change in buprenorphine prescriptions for opioid use disorder in Arizona from 2011-2016. *2019 Subst Abus* 2019 (in press). (Podium presentation at the 2019 AHSR, Salt Lake City, Utah, USA, October 16-18, 2019).
4. Park H, Jiang X, Song H-J, Childs-Kean LM, **Lo-Ciganic W**, Cook RL, Nelson DR. Direct-acting antiviral therapy among individuals with chronic hepatitis C and substance use disorders: A cohort study. *2019 Subst Abus* 2019 (in press). (Poster presentation at the 2019 AHSR, Salt Lake City, Utah, USA, October 16-18, 2019).
5. Zhou L_(g), Bhattacharjee S, Kwok CK, Tighe PJ, Reisfield GM, Malone DC, Slack M. **Lo-Ciganic W**. Dual-trajectories of opioid and gabapentinoid use and risk of subsequent drug overdose among United States Medicare beneficiaries. *Pharmacoepidemiol Drug Saf* 2019 (in press). (Podium presentation at the 2019 ICPE, Philadelphia, Pennsylvania, USA, August 24-28, 2019).

6. Wang T_(p), Ge Y, Gellad WF, Huang JL, Reisfield G, Lee JK, Delcher PC, Hincapie-Castillo JM, Kwoh CK, **Lo-Ciganic W**. Dual trajectories of opioid and benzodiazepine use and risk of opioid overdose among US Medicare beneficiaries. *Pharmacoepidemiol Drug Saf* 2019. (Poster presentation at the 2019 ICPE, Philadelphia, Pennsylvania, USA, August 24-28, 2019).
7. **Lo-Ciganic W**, Huang JL, Zhang HH, Weiss JC, Wu Y, Kwoh CK, Donohue JM, Cochran G, Gordon AJ, Malone DC, Kuza CC, Gellad WF. Using machine learning to predict risk of opioid overdose in fee-for-service Medicare. *Pharmacoepidemiol Drug Saf* 2019 (in press). (Podium presentation at the 2019 ICPE, Philadelphia, Pennsylvania, USA, August 24-28, 2019).
8. **Zhou L_(g)**, Bhattacharjee S, Kwoh CK, Tighe PJ, Reisfield GM, Malone DC, Slack M. **Lo-Ciganic W**. Dual-trajectories of opioid and gabapentinoid use and risk of subsequent drug overdose among United States Medicare beneficiaries. *Pharmacoepidemiol Drug Saf* 2019 (in press). (Podium presentation at the 2019 ICPE, Philadelphia, Pennsylvania, USA, August 24-28, 2019).
9. **Zhou L_(g)**, Bhattacharjee S, Kwoh CK, Tighe PJ, Reisfield GM, Malone DC, Slack M. **Lo-Ciganic W**. Dual-trajectories of opioid and gabapentinoid use and risk of subsequent drug overdose among United States Medicare beneficiaries. *Value Health* 2019; 22 (supplement 2): S182. (Podium presentation & Student Spotlight at the 2019 ISPOR 24rd annual International Meeting, May 18-22, 2019, New Orleans, LA, USA).
 - Student Spotlight (only 8 students were selected)
10. Zhou L_(g), Bhattacharjee S, Kwoh CK, Malone DC, Tighe PJ, Reisfield GM, Slack M. **Lo-Ciganic W**. Association between dual-trajectories of opioid and gabapentinoid use and healthcare expenditures among United States Medicare beneficiaries. *Value Health* 2019; 22 (supplement 2): S172-173. (Poster presentation at the 2019 ISPOR 24rd annual International Meeting, May 18-22, 2019, New Orleans, LA, USA).
11. Zhou L_(g), Bhattacharjee S, Kwoh CK, Tighe PJ, Malone DC, Slack M. **Lo-Ciganic W**. Trends, patient and prescriber characteristics and off-label use of gabapentinoids among United States ambulatory care visits from 2003-2015. *Value Health* 2019; 22 (supplement 2): S175. (Poster presentation at the 2019 ISPOR 24rd annual International Meeting, May 18-22, 2019, New Orleans, LA, USA).
12. **Bhattacharjee S**, Malone DC, Lee JK, Knapp S, **Lo-Ciganic W**, Burke WJ. Extent and factors associated with adherence to appropriate antidepressant treatment during acute and continuation phase depression treatment among older adults with dementia and major depressive disorder. *Value Health* 2019; 22 (supplement 2): S287. (Poster presentation at the 2019 ISPOR 24rd annual International Meeting, May 18-22, 2019, New Orleans, LA, USA).
13. **Bhattacharjee S**, Malone DC, Lee JK, Knapp S, **Lo-Ciganic W**, Burke WJ. Health outcomes associated with adherence to Healthcare Effectiveness Data and Information

Set (HEDIS) antidepressant medication management measures during acute and continuation phases of depression treatment among older adults with dementia and major depressive disorder. *Value Health* 2019; 22 (supplement 2): S270. (Poster presentation at the 2019 ISPOR 24th annual International Meeting, May 18-22, 2019, New Orleans, LA, USA).

14. Chang C-Y_(g), Park H, **Lo-Ciganic W**. The prevalence of sun protective behaviors across different age groups in the US population: findings from the 2015 Health Interview Survey. *Value Health* 2019; 22 (supplement 2): S89. (Poster presentation at the 2019 ISPOR 24th annual International Meeting, May 18-22, 2019, New Orleans, LA, USA).
15. Chang C-Y_(g), Park H, **Lo-Ciganic W**. Use of immune checkpoint inhibitors and risk of immune-related adverse events among patients with advanced melanoma: a systematic review and network meta-analysis. *Value Health* 2019; 22 (supplement 2): S89. (Poster presentation at the 2019 ISPOR 24th annual International Meeting, May 18-22, 2019, New Orleans, LA, USA).
16. Kumar N_(f), **Lo-Ciganic W**, Zhou L_(g), Ashbeck E, Kwoh CK. Lipid screening in Medicare beneficiaries with rheumatoid arthritis. *Arthritis Rheumatol* 2018; 70(s9):1861. (Poster presentation at the 2018 American College of Rheumatology (ACR) Annual Conference, Chicago, IL, USA, October 19-24, 2018).
17. Kollampare S_(f), Kwoh CK, **Lo-Ciganic W**, Zhou L_(g), Ashbeck E, Sudano D. Serologic screening for Coccidioidomycosis among Medicare Beneficiaries with rheumatic diseases on biologic response modifiers, corticosteroids, and disease modifying anti-rheumatic drugs (DMARDs). *Arthritis Rheumatol* 2018; 70(s9):1221. (Poster presentation at the 2018 ACR Annual Conference, Chicago, IL, USA, October 19-24, 2018).
18. Chinthammit C_(g), Bhattacharjee S, Slack M, Bentley JP, Warholak TL, **Lo-Ciganic W**. Geographic variation of high-risk medication use among Medicare beneficiaries in the United States. *Value Health* 2018; 21(suppl 2): S45-S46. (Poster presentation at the 2018 ISPOR Asia Pacific, Tokyo, Japan, September 8-11, 2018).
19. **Lo-Ciganic W**, Gellad WF, Zhou L_(g), Donohue JM, Roubal A, Hines L, Lindemann J, Malone DC, Bhattacharjee S, Lee JK, Kwoh CK. Geographic variation of high-risk opioid use and risk of overdose among disabled Medicare beneficiaries in the US from 2011-2015. *Pharmacoepidemiol Drug Saf* 2018; 27:374. (Podium presentation at the 2018 ICPE, Prague, Czech Republic, August 22-26, 2018).
20. Chang C-Y_(g), Tan T-W, **Lo-Ciganic W**. Racial and ethnic disparities in lower extremity amputation among Medicare beneficiaries with diabetic foot ulceration and infection in the United States. *Pharmacoepidemiol Drug Saf* 2018; 27:70. (Poster presentation at the 2018 ICPE, Prague, Czech Republic, August 22-26, 2018).
21. Bhattacharjee S, Patanwala A, Malone DC, Lee JK, Knapp S, **Lo-Ciganic W**, Warholak T, Burke WJ. Comparison of all-cause mortality and all-cause hospitalization risk for

medications to treat Alzheimer's disease. Value Health 2018; 21:S204. (Poster presentation at the 2018 ISPOR 23rd annual International Meeting, May 19-23, 2018, Baltimore, MD, USA).

22. Bhattacharjee S, Malone DC, Lee JK, Knapp S, **Lo-Ciganic W**, Burke WJ. Extent and predictors of potentially inappropriate antidepressant use among older adults with dementia and major depressive disorder. Value Health 2018; 21:S189. (Poster presentation at the 2018 ISPOR 23rd annual International Meeting, May 19-23, 2018, Baltimore, MD, USA).
 - Awarded as Finalist for Research Poster presentation award, indicating top 10% of accepted abstracts.
23. **Lo-Ciganic W**, Gellad WF, Zhou L^(g), Donohue JM, Roubal A, Hines L, Lindemann J, Malone DC, Bhattacharjee S, Lee JK, Kwoh CK. Geographic variation of high-risk opioid use and risk of overdose among disabled Medicare beneficiaries in the US from 2011-2015. Value Health 2018; 21:S2. (Podium presentation at the 2018 ISPOR 23rd annual International Meeting, May 19-23, 2018, Baltimore, MD, USA).
24. Zhou L^(g), Kwoh CK, Ran D, Ashbeck EL, **Lo-Ciganic W**. Lack of association between beta blocker use and reduction in joint pain and analgesic use among participants with symptomatic radiographic knee osteoarthritis. Value Health 2018; 21:S200. (Poster presentation at the 2018 ISPOR 23rd annual International Meeting, May 19-23, 2018, Baltimore, MD, USA).
25. Zhou L^(g), Kwoh CK, Ran D, Ashbeck EL, **Lo-Ciganic W**. Trends in baseline retinal examinations and associated factors among new initiators of hydroxychloroquine in Medicare: 2011-2015. Value Health 2018; 21:S200. (Poster presentation at the 2018 ISPOR 23rd annual International Meeting, Baltimore, MA USA, May 19-23, 2018).
26. Chien H-C^(p), **Lo-Ciganic W**, Kwoh CK, Kao-Yang Y-H. Use of aromatase inhibitors and risk of arthralgia among Taiwanese breast cancer women: A nation-wide claims analysis. Arthritis Rheumatol 2017; 69(suppl 10). (Podium presentation at the 2017 ACR Annual Conference, San Diego, CA, USA, November 3-8, 2017).
27. Sudano DG, Kwoh CK, Zhou L^(g), Ashbeck EL, **Lo-Ciganic W**. Use of disease-modifying anti-rheumatic drugs, biologic response modifiers and corticosteroids, and subsequent risk of coccidioidomycosis infection among Medicare beneficiaries. Arthritis Rheumatol. 2017; 69(suppl 10). (Podium presentation at the 2017 ACR Annual Conference, San Diego, CA, USA, November 3-8, 2017).
28. Bhattacharjee S, Malone DC, Warholak T, Knapp S, **Lo-Ciganic W**, Lee JK, Burke WJ. Comparison of fall and fracture risk for medications to treat Alzheimer's disease. J Manag

Care Pharm 2017 (Poster presentation at the 2017 American Managed Care Pharmacy (AMCP) Nexus annual meeting, Dallas, Texas, USA, October 16-19, 2017).

29. **Lo-Ciganic W**, Gellad WF, Donohue JM, Zhou L_(g), Roubal A, Hines L, Lindemann J, Lee JK, Malone DC, Bhattacharjee S, Kwoh CK. Geographic variation of potentially inappropriate prescription opioid use among disabled Medicare beneficiaries. *Pharmacoepidemiol Drug Saf* 2017; 26: 627. (Poster presentation at the 2017 ICPE, Montreal, Canada, August 26-30, 2017).
30. **Lo-Ciganic W**, Donohue JM, Kim JY, Krans EE, Kelley D, James E, Jarlenski M. Trajectories of buprenorphine opioid agonist therapy during pregnancy in a large Medicaid program. *Pharmacoepidemiol Drug Saf* 2017; 26:13-14. (Podium presentation at the 2017 ICPE, Montreal, Canada, August 26-30, 2017).
31. **Lo-Ciganic W**, Donohue JM, Malone DC, Gellad WF. Characteristics of new hepatitis C virus therapy utilization in a large Medicaid program. *Am J Pharm Educ* 2017. (Poster presentation. Presented as New Investigator Award Winner poster presentation at the American Association of College of Pharmacy Annual Meeting, Nashville, TN, USA, July 15-17, 2017).
 - New Investigator Award Winner poster presentation at the American Association of College of Pharmacy.
32. Zhou L_(g), Kwoh CK, Gellad WF, Donohue JM, Roubal A, Hines L, Malone DC, Bhattacharjee S, Lee JK, Lindemann J, Bell M, Westra J_(g), **Lo-Ciganic W**. Geographic variation of inappropriate prescription opioid use among disabled Medicare beneficiaries. *Value Health* 2017; 20(5): A7. (Podium presentation at the 2017 ISPOR 22nd Annual International Meeting, Boston, MA, USA, 20-24, May 2017).
 - Awarded as the Best Student Podium Presentation.
33. **Hsieh P_(r)**, Chou C, Hsu W, **Lo-Ciganic W**. Using machine learning to predict the technical difficulty of colorectal endoscopic submucosal dissection in endoscopists with limited experience. *J Gastroenterol Hepatol* 2016; 31: 269 (Podium presentation at the 58th Annual Meeting of the Japanese Society of Gastroenterology, Kansai, Japan, November 3-5, 2016).
34. **Lo-Ciganic W**, Floden L, Ashbeck EL, Zhou L_(g), Kwoh CK. Analgesic use and subsequent risk of falls in participants with or at risk of knee osteoarthritis. *Arthritis Rheumatol.* 2016; 68(suppl 10). (Poster presentation at the 2016 American College of Rheumatology (ACR) Annual Conference, Washington DC, USA, November 11-16, 2016)
35. **Lo-Ciganic W**, Donohue JM, Jones BL, Perera S, Thorpe JM, Thorpe CT, Marcum ZA, Gellad WF. Association between trajectories of diabetes medication adherence and

hospitalization risk in a large Medicaid program. *Pharmacoepidemiol Drug Saf* 2016; 25: 52. (Poster presentation at the 2016 ICPE, Dublin, Ireland, Aug 25-28, 2016).

36. **Lo-Ciganic W**, Gellad WF, Huskamp HA, Choudhry NK, Zhang R, Chang CH, Jones BL, Richards-Shubik S, Guclu H, Donohue JM. "Who Were the Early Adopters of Dabigatran: An Application of Group-Based Trajectory Models. *Value Health* 2016; 19: A58. (Poster presentation at 2016 ISPOR 21th Annual Meeting, Washington DC, USA, May 21-25, 2016).
37. Almutairi A(g), Zhou L(g), Lee JK, Slack M, Martin JR, **Lo-Ciganic W**. Comparative effectiveness and safety of novel oral anticoagulants (NOACs) versus vitamin K antagonists (VKA) in atrial fibrillation: a meta-analysis of observational studies. *Value Health* 2016; 19 (3): A41. (Poster presentation at the 2016 ISPOR 21th Annual Meeting, Washington DC, USA, May 21-25, 2016).
38. Anderson TS, **Lo-Ciganic W**, Gellad WF, Zhang R, Huskamp HA, Choudhry NK, Chang C-H, Richards-Shubik S, Guclu H, Donohue JM. Physician adoption of new cardiovascular drugs: does novelty matter? *J Gen Intern Med* 2016; 31: S339. (Poster presentation at the 2016 Society of General Internal Medicine Annual Meeting, Hollywood FL, USA, May 11-14, 2016).
39. **Lo-Ciganic W**, Gellad WF, Gordon AJ, Cochran G, Zemaitis MA, Donohue JM. Trajectories of buprenorphine treatment and associated emergency department and inpatient use in a large Medicaid Program. *Value Health* 2015; 18 (3): A129. (Poster presentation at the 2015 ISPOR 20th Annual Meeting, Philadelphia, Pennsylvania, USA, May 16-20, 2015).
 - Awarded as ISPOR Finalist for Research Poster presentation award, indicating top 10% of accepted abstracts.
40. **Lo-Ciganic W**, Donohue JM, Thorpe JM, Perera S, Thorpe CT, Marcum ZA, Gellad WF. Using machine learning to examine medication adherence thresholds and risk of hospitalization. *Pharmacoepidemiol Drug Saf* 2015; 24: 210-211. (Podium presentation at the 2015 ICPE, Boston, MA, August 22-26, 2015).
41. **Lo-Ciganic W**, Gellad WF, Gordon AJ, Cochran G, Donohue JM. Trajectories of buprenorphine treatment and associated emergency department and inpatient use in a large Medicaid program. *Pharmacoepidemiol Drug Safety* 2015; 24:27-28. (Podium presentation at the 2015 ICPE, Boston, MA, August 22-26, 2015).
42. **Lo-Ciganic W**, Gellad WF, Gordon AJ, Cochran G, Zemaitis MA, Donohue JM. Associations between buprenorphine treatment trajectories and clinical outcomes in a large Medicaid program. *Drug Alcohol Depend* 2015; 156:e132. (Poster presentation at the 2015 College on Problems of Drug Dependence (CPDD) annual meeting, Phoenix, AZ, June 13-18, 2015).

43. **Lo-Ciganic W**, Donohue JM, Thorpe JM, Perera S, Thorpe CT, Marcum ZA, Gellad WF. Examining a threshold of adherence to oral hypoglycemic agents relevant to clinical outcomes in diabetes: A tree-structured survival model. *Value Health* 2014; 17(3): A253. (Poster presentation at the 2014 ISPOR 19th Annual Meeting, Montreal, ON, Canada, May 31- June 4, 2014).
44. Gordon AJ, **Lo-Ciganic W**, Cochran G, Gellad WF, Donohue JM. Characteristics of buprenorphine opioid agonist treatment in a longitudinal US Medicaid population. *Drug Alcohol Depend.* 2015; 146:e126. DOI:10.1016/j.drugalcdep.2014.09.260. (Poster presentation at the 2014 College on Problems of Drug Dependence (CPDD) annual meeting, San Juan, Puerto Rico, June 14-19, 2014).
45. Schlenk EA, Vander Bilt J, **Lo-Ciganic W**, Woody SE, Zgibor JC, Conroy MB, Kwoh CK, Newman AB. Integration of a healthy aging program into the Arthritis Foundation Exercise Program: six-month results. *Arthritis Rheum* 2012; 64(10): S1024-5. (Podium presentation at the 2012 ACR annual conference, Washington DC, USA, Nov 9-14, 2012).

Media/Blogs

- 2017 PhRMA Foundation Research Starter Award had been reported in over 40 local and national news, radio stations and TV news such as US News and Washington Times. For example, interviewed by the KGUN-9 TV News:
<https://www.youtube.com/watch?v=DPoEetdbxpc>
- Medication adherence and risk of hospitalization: can machine learning help establish thresholds? The innovation and relevance of the work, "Using machine learning to examine medication adherence thresholds and risk of hospitalization" has been highlighted in the *Medical Care blog on August 21, 2015*.
<http://journals.lww.com/lww-medicalcare/blog/PointCounterpoint/pages/post.aspx?PostID=37>

Referred Journal Articles, submitted or in progress

Keys to indicate author relationship: self=bold; presenting author =underline; fellow =f; graduate student =g; post-doctoral associate/fellow =p; resident =r

- Chien H-C_(p), **Lo-Ciganic W**, Kao-Yang Y-H, Kwoh CK. Use of aromatase inhibitors and risk of arthritis and musculoskeletal problems among women with breast cancer in Medicare (*Lancet Oncology Open*; Chien and Lo-Ciganic were co-first authors and Kao-Yang and Kwoh were co-corresponding authors; submitted, and under review).

2. Xie J(g), Zhang B, Jian M, Zeng D, **Lo-Ciganic W**. Readmission prediction for patients with heterogeneous hazard: A trajectory-based deep learning approach. (Submitted and under revision of the Inf Syst Res).
3. Bhattacharjee S, Malone DC, Warholak T, Knapp S, **Lo-Ciganic W**, Lee JK, Burke WJ. Comparison of all-cause mortality and all-cause hospitalization risk among Medicare Beneficiaries Prescribed Medications for Alzheimer's disease. (submitted and under revision of BMJ)
4. Zhou L(g), Bhattacharjee S, Kwoh CK, Tighe PJ, Malone DC, Slack M, **Lo-Ciganic W**. Trends, patient and prescriber characteristics and off-label use of gabapentinoids among United States ambulatory care visits from 2003 to 2015 (submitted and under review of Addiction).
5. Lobo C(g), Jalal H, Chang, C-C, **Lo-Ciganic W**, Gellad WF, Gordon AG, Cochran G, Karp JF, David K, Donohue JM. Using unsupervised clustering to identify high-risk opioid use in Medicare. (Submitted and under review of the Medical Care).
6. Zhou L(g), Kwoh CK, Lin TC, **Lo-Ciganic W**. Trends in baseline retinal examinations and associated factors among new initiators of hydroxychloroquine in Medicare: 2011-2016 (manuscript preparation).
7. **Lo-Ciganic W**, Gellad WF, Donohue JM, Zhou L, Roubal AM, Malone DC, Hines L, Lindemann J, Lee JK, Zhang H, Kwoh CK. Variation in concurrent opioid and benzodiazepine Use in Medicare (manuscript preparation).
8. Zhou L(g), Bhattacharjee S, Kwoh CK, Tighe PJ, Reisfield GM, Malone DC, Slack M, **Lo-Ciganic W**. Dual trajectories of opioid and gabapentinoid use and risk of subsequent adverse health outcomes among Medicare beneficiaries in the United State. (submitted to JAMA Internal Medicine).
9. Zhou L(g), Bhattacharjee S, Kwoh CK, Tighe PJ, Reisfield GM, Malone DC, Slack M, **Lo-Ciganic W**. Association between dual trajectories of opioid and gabapentinoid use and healthcare expenditures among Medicare beneficiaries in the United State. (Manuscript preparation).
10. Sudano DG, Kowh CK, Zhou L(g), Ashbeck EL, **Lo-Ciganic W**. Use of disease-modifying anti-rheumatic drugs, biologic response modifiers and corticosteroids, and subsequent risk of coccidioidomycosis infection among Medicare beneficiaries (manuscript preparation).

11. Chinthammit C_(g), Bhattacharjee B, Slack M., Bentley JP, Warholak TL, **Lo-Ciganic W.** Geographic variation of high-risk medication use among Medicare Part D beneficiaries (manuscript preparation)
12. Tan T, Chang C_(g), **Lo-Ciganic W.** Racial and ethnic disparities in lower extremity amputation among Medicare beneficiaries with diabetic foot ulceration and infection in the United States. (manuscript preparation).
13. Tan T, Zhou L_(g), Bell M, **Lo-Ciganic W.** Racial and ethnic minorities were associated with less prescription opioid use before and after lower extremity amputation in US Medicare (manuscript preparation).
14. Chang C_(g), Park H, **Lo-Ciganic W.** Use of immune checkpoint inhibitors and risk of immune-related adverse events among patients with advanced melanoma: a systematic review and network meta-analysis. (manuscript preparation).
15. Wang T, Ge Y, Gellad WF, Huang JL, **Lo-Ciganic W.** Association between dual trajectories of opioid and benzodiazepine use and risk of opioid overdose among US Medicare beneficiaries. (manuscript preparation).
16. Kumar N_(p). Kwoh CK. Zhou L. Ashbeck EL, **Lo-Ciganic W.** Lipid screening in Medicare beneficiaries with rheumatoid arthritis. (manuscript preparation).

PROFESSIONAL ACTIVITIES: TEACHING

Courses Taught

Years	Institution, Program	Course #, title	Credits/hours	Role
2019 spring	University of Florida, College of Pharmacy, Pharm D Program	PHA5244: Principles of Evidence-Based Practice	3 credits hours, 276 students (50% effort)	Primary coordinator/ instructor
2018 spring	University of Arizona, College of Pharmacy, Health Pharmaceutical Outcome Graduate Program	SAS workshop	3 credit hours, 4 students (100% effort)	Primary coordinator/ instructor
2016- 2018 spring	University of Arizona, College of Pharmacy, PharmD Program	PhPr 861A: Drug Literature Evaluation and Statistical Methods	2 credit hours, 100-140 students (97.5% effort)	Primary coordinator/ instructor

W. Jenny Lo-Ciganic

Curriculum Vitae

2016 spring	University of Arizona, College of Pharmacy, Health Pharmaceutical Outcome Graduate Program	PhSc 596E: Graduate Seminar	1 credit hour, 15 students (95% effort)	Primary coordinator/ instructor
2016 fall	University of Arizona, College of Pharmacy, Health Pharmaceutical Outcome Graduate Program	PhSc 513C: Health Technology Assessment	3 credit hours, 8 students (60% effort)	Primary coordinator/ instructor
2010, 2011	University of Pittsburgh, Institute for Clinical Research and Education	CLRES 2005: Clinical Research Methods	7 hours per week for 2.5 months; 35-75 students	Primary teaching assistant (recitation session)

Invited lectures, seminars, tutorials, workshop & continuing education courses

Year	Institution, Program	Course #, title	Lecture title or role
2/2019	Gainesville Geriatric Research Education and Clinical Centers (GRECC)	Monthly investigator luncheon	Applying advanced analytics in pharmaceutical outcomes research
2019, spring	University of Florida, College of Pharmacy, Department of Pharmaceutical Outcomes & Policy	PHA 6265: Introduction to Pharmaceutical Outcomes & Policy (2 x1.5 hours, 8 students)	Lecturer (Developing a research question; Predictive modeling)
06/2018	National Cheng-Kung University, College of Pharmacy, Tainan, Taiwan	Special invited seminar	Applying advanced analytics in pharmaceutical outcomes research
11/2016	University of Arizona, College of Public Health	CPH 587: Analysis Methods for Health Policy Decision Makers (1 hour, 12 students)	Introduction to machine learning methods
10/2016	University of Arizona Arthritis Center	Annual Arthritis Conversations and Luncheon	Researcher speaker and panel discussant
09/2016	University of Arizona, College of Medicine,	Rheumatology Grand Round	Analgesic pain management and adverse drug reactions

	Division of Rheumatology		with opioid use in older adults
09/2015	The University of Arizona, College of Pharmacy	Workshop: Training Program in Health Outcomes and Pharmacoeconomic Research (1 hour, 60 attendees)	Data sources for pharmaco-economic and health service research
09/2015	University of Arizona, College of Public Health	Graduate Seminar	Applications of pharmacoepidemiological methods to evaluate medication utilization and to improve pharmaceutical outcomes
02/2015	University of Arizona Arthritis Center, Tucson	Annual Arthritis Conversations and Luncheon	Round table researcher host
03/2014	University of Pittsburgh, School of Medicine/Graduate School of Public Health	EPIDEM 2850: Introduction to Pharmacoepidemiology, Division of Geriatric Medicine	Changes in cholesterol-lowering medications use over a decade, and statins and gait speed decline in community dwelling older adults
03/2011	University of Pittsburgh, School of Medicine/Graduate School of Public Health	EPIDEM 2850: Introduction to Pharmacoepidemiology, Division of Geriatric Medicine	Aspirin, nonaspirin nonsteroidal anti-inflammatory, acetaminophen and risk of ovarian cancer
2011	University of Pittsburgh, Graduate School of Public Health	EPIDEM 2183: Reading, Analyzing and Interpreting the Public Health and Medical Literature	Causality

Major Advisor & Committee Chair for Graduate Student Theses, and Dissertations

Years served	Name of Student	Program/Degree Award	Title of Thesis/Dissertation or current status
2018-present	Ching-Yuan (Peggy) Chang	PhD, Pharmaceutical Outcomes &	Took preliminary exams in January 2019

Policy, University
of Florida (UF)

2016-2019	Lili Zhou	PhD, Health Pharmaceutical Outcomes, University of Arizona (UA)	Final dissertation defense date: April 26, 2019 Title: 'Trends and Trajectories of Gabapentinoid Use and Its Associations with Subsequent Health Outcomes and Healthcare Expenditures in the United States'
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Service on Masters or Doctoral Committees

Years served	Name of Student	Degree Award	Title of Thesis/Dissertation
2019-present	Patrick Squires	PhD	TBD (major advisor: Joshua Brown)
2019-present	Xinyi Wang	PhD	TBD (major advisor: Haesuk Park)
2018-present	Cheng (Alice) Chen	PhD	Took written proposal defense in November 2019 (Major advisor: Yu-Jung Wei)
2015	Diana Sun	PhD	Characterizing response patterns to ranibizumab therapy in patients with wet age-related macular degeneration: a latent class growth analysis
2017-2018	Chanadda Chinthammit	PhD	Use of high risk medications among Medicare Part D beneficiaries

**Advisor for Graduate Student Independent Study, Internship, Post-doctoral/Resident
Projects**

Years	Name of Student	Program	Project title
2017	Hsu-Chih Chien	Postdoctoral fellow	Use of aromatase inhibitors and risk of arthritis and musculoskeletal problems
2017	Lili Zhou	PhD	Use of disease-modifying antirheumatic drugs, biologic response modifiers and corticosteroids, and subsequent risk of coccidioidomycosis infection among Medicare beneficiaries

2017	Jiaheng Xie	PhD in Management Information System	Improving readmission prediction with social media: a trajectory-aware deep learning approach
2016-2018	Lili Zhou	PhD	Geographic variation of problematic opioid use in Medicare
2016-2017	Jordan Westra	MPH (internship)	Geographic variation in analgesic Use among Medicare Beneficiaries with chronic lower extremity osteoarthritis or lower back pain
2016	Chanadda Chinthammit	PhD	Trajectories of gait speed decline and patterns of analgesic use in patients with- or at-risk of knee osteoarthritis: data from the Osteoarthritis Initiative
2015-2016	Abdulaali Almutairi	PhD	Effectiveness and safety of non-vitamin K oral anticoagulants for non-valvular atrial fibrillation or venous thromboembolism: systematic review and meta-analyses.
2015-2016	Erik Overgard	PharmD	Senior project: Assessing the impact of education about Medication Assisted Therapy has on probation and parole officers

PROFESSIONAL ACTIVITIES: GRANTS & CONTRACTS

Previous Grant/Contract Support

Grant Period	Grant Number and Title	Role, effort	Source	Amount
08/2017-07/2019	1R03MH114503-01, Depression Treatment and Outcomes among Older Adults with Dementia in the United States (PI: Bhattacharjee)	Co-Investigator, 1%	National Institute of Mental Health (NIMH)	\$100,000 (total direct cost)

07/2017-03/2019	Research Starter Award in Health Outcomes, Using Advanced Analytics to Predict Problematic Prescription Opioid Use in Medicare	PI, 10%	Pharmaceutical Research and Manufacturers of America (PhRMA) Foundation	\$100,000 (total direct cost)
07/01/2017-06/30/2018	Pennsylvania Medicaid Research and Data Analysis to Improve Quality of Care for Opioid Use Disorder in Perinatal Period	Consultant, 9%	Pennsylvania Department of Health Services / University of Pittsburgh Pennsylvania Medicaid Research Center (MRC)	\$10,000 (subcontract)
2013-2017	NHLBI R01HL 119246, The Role of Physician Networks in the Adoption of New Prescription Drugs (PI: Donohue)	Consultant (2016-2017)	National Heart, Lung and Blood Institute	\$10,000 (total direct cost)
01/2016-03/2017	New Investigator Award, Adherence Trajectories of New Hepatitis C Virus Therapy in a Large Medicaid Program	PI, 10%	American Association of College of Pharmacy (AACP)	\$10,873 (total)
09/2015-08/2017	UAHS CDA13, Using machine Learning to Predict Problematic Opioid Use	PI, 75%	University of Arizona Health Sciences Center	\$225,050
2011-2013	IST # LANTU R 06017, Early insulin uses and incidence of diabetes complications: prediction and decision analysis	Statistical consultants, 5%	Sanofi Aventis Global	\$200,000

Current Grants and Contracts Support

Grant Period	Grant Number and Title	Role, effort	Source	Amount
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05/2019-01/2021 (R21)	Developing a Real-Time Trajectory Tool to Identify Potentially Unsafe Concurrent Opioid and Benzodiazepine Use among Older Adults (PI: Lo-Ciganic)	PI, 20%	National Institute on Aging (NIA)	\$308,206 (direct, over 2 years)
07/2018-06/2020	Machine learning and opioid overdoses in Allegheny County (Multi-PI: Gellad/Donohue/Lo-Ciganic)	MPI, 19%	Richard King Mellon Foundation / University of Pittsburgh	\$61,818 (total direct over 2 years, subcontract)
09/2017-06/2020 (R01)	1R01DA044985, Using machine Learning to Predict Problematic Opioid Use (PI: Gellad)	Consortium-PI, 30%	National Institute of Drug Abuse (NIDA) / University of Pittsburgh	\$739,051 (total, subcontract)
04/2019-03/2020 (internal grant)	Using machine learning to predict direct-acting antiviral treatment failure in patients with chronic hepatitis C virus infection (PI: Park)	Co-I, 10%	University of Florida, Clinical and Translational Science Institute (CTSI)	\$68,000 (direct, over 1 years)
