

## CURRICULUM VITAE

Melissa H. Roberts, PhD

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Contact: University of New Mexico  
College of Pharmacy  
Pharmacy Practice & Admin Sciences  
MSC09 5360  
1 University of New Mexico  
Albuquerque, NM 87131-0001

Office phone: 505-925-0953  
Email: [MHRoberts@salud.unm.edu](mailto:MHRoberts@salud.unm.edu)

### Education

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PhD 2013, Pharmaceutical Science (Pharmacoeconomics Concentration), with Distinction  
University Of New Mexico, College of Pharmacy, Albuquerque, New Mexico  
Dissertation: *Comparative effectiveness of triple therapy compared to combination or mono long-acting bronchodilator pharmacotherapy for COPD*  
Committee Chair: Matthew Borrego, PhD

MS 1999, Health Systems  
Georgia Institute of Technology, Industrial & Systems Engineering, Atlanta, Georgia  
Internship Project: *A shot in the dark: Achieving optimal coverage through CDC funded state vaccination programs*  
Graduate Advisor: Justin Myrick, PhD

Post-Baccalaureate Studies 1996-1997, Statistics  
University of New Mexico, Albuquerque, New Mexico  
1993-1994, Mathematics  
Georgia State University, Atlanta, Georgia

BS 1981, Economics (Finance Concentration)  
University of Pennsylvania, Wharton School, Philadelphia, Pennsylvania

### Professional Appointments / Positions

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#### HEALTHCARE RESEARCH AND ECONOMICS

2017 – Current *Assistant Professor*  
Pharmacy Practice and Administrative Sciences, UNM College of Pharmacy  
Albuquerque, NM

2016 – 2018 *Senior Fellow*  
Robert Wood Johnson Center for Health Policy, UNM, Albuquerque, NM

2016 – 2018 *VA Health Care System Research Faculty Appointment (without compensation)*  
VA Medical Center, Albuquerque, NM

2016 – 2017 *Research Assistant Professor*  
Pharmacy Practice and Administrative Sciences, UNM College of Pharmacy  
Albuquerque, NM

2014 – 2016 *Temporary Teaching Faculty / Staff support for MTM Call Center*  
Pharmacy Practice and Administrative Sciences, UNM College of Pharmacy  
Albuquerque, NM

2010 – 2015 *Senior Research Associate*  
Health Services Research Division, Lovelace Clinic Foundation (dba LCF Research)  
Albuquerque, NM

2009 – 2010 *Research Associate*  
Center for Pharmacoeconomics Research, Lovelace Respiratory Research Institute  
Albuquerque, NM

2004 – 2009 *Senior Economic Analyst*  
Energy, Economic and Environmental Consultants, Albuquerque, NM

2002 – 2004 *Research Associate*  
Center for Pharmacoeconomics Research, Lovelace Respiratory Research Institute,  
Albuquerque, NM

2001 *Database Consultant*  
Medical Economics, Lovelace Health Plan, Albuquerque, NM

2000 – 2004 *Research/Database Consultant*  
Kaiser Permanente-Georgia Region, Atlanta, Georgia

1999 – 2000 *Research Analyst*  
Kaiser Permanente-Georgia Region, Atlanta, Georgia

1999 *Intern*, Kaiser Permanente Group-Georgia Region, Atlanta, Georgia

1998 *Intern*, Vaccines and Immunizations, Centers for Disease Control, Atlanta, Georgia

#### OTHER PROFESSIONAL POSITIONS

1988 – 1990 Central Finance Officer, Lambert Spawn Company, Coatesville, PA

1985 – 1987 Inventory Control Officer, Lambert Spawn Company, Coatesville, PA

1981 – 1985 Finance Officer (1LT-CPT), U.S. Army, 105<sup>th</sup> Finance Section, Augsburg, Germany

#### OTHER TRAINING / CERTIFICATIONS

Jul 2020 Longitudinal Data Analysis Using SAS, Statistical Horizons (Paul Allison, Instructor)

2019 – 2020 University of New Mexico Clinical & Translational Investigator's Program (CTIP)  
Monthly Seminar, Albuquerque, NM

Jul 2018 Multilevel and Mixed Models Using R, Statistical Horizons, Philadelphia PA

Jan 2016 Advanced Course in Pharmacoeconomic Modeling, University of Arizona College of  
Pharmacy, Tucson, AZ

Nov 2013 PCORI workshop, *The Power of Partnership in Research: Applying Patient-Centered  
Outcomes Research in Racial and Ethnic Minority Communities*, Albuquerque, NM

Jun 2012 Discrete Event Simulation for Economic Analyses (Concepts and Applications), ISPOR  
17<sup>th</sup> Annual International Meeting Short Courses, Washington, DC

Apr 2010 CMS 101 Medicare Data Workshop, Minneapolis, MN

Jun 2009 Certification in Management Accounting (Institute of Management Accountants)

## SOFTWARE SKILLS

SAS, Stata, R, Microsoft Office Products (Word, Excel, PowerPoint, MS Access)

## Professional Society Memberships

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- 2018 – Current Academy Health
- 2018 – Current Society for Medical Decision Making
- 2009 – Current American Thoracic Society (ATS)  
*Behavioral Science and Health Services Research (BSHSR) Assembly, 2012 – Current*
- 2009 – Current International Society for Pharmacoeconomics and Outcomes Research (ISPOR)  
*Faculty Advisor Council, 2016 – Current*
- 2009 – 2015 International Society for Pharmacoepidemiology (ISPE)
- 2008 – 2010 Institute of Management Accountants (IMA)

## Publications, Reports, and Presentations

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(\* indicates student/resident author/presenter)

### PEER-REVIEWED MANUSCRIPTS

1. Bakhireva LN, Leeman L, **Roberts M**, Rodriguez D, Jackson SW. You didn't drink during pregnancy, did you? *Alcohol Clin Exp Res*. 2021. Online ahead of print. PMID: 33393695.
2. Pham NT\*, Anderson JR, Dodd MA, **Roberts MH**, Yang S, Yon CM, Ray GM. Awareness and perceptions of advanced practice pharmacists among healthcare providers in New Mexico. *J Am Pharm Assoc*. 2021;61(1):101-108. Epub 2020 Oct 29. PMID: 33132104.
3. **Roberts MH**, Ferguson G. Real-world evidence: bridging gaps in evidence to guide payer decisions. *Pharmacoecon Open*. 2020. doi: 10.1007/s41669-020-00221-y. Online ahead of print. PMID: 32557235.
4. **Roberts M**, He X\*, Diaz Fuentes C, Edwardson N. Subscriber continuity in Marketplace plans: factors associated with reenrollment and plan changes. *J Med Econ*. 2020;23(9):940-951. PMID: 32519908.
5. Jakeman BJ, Logothetis SJ\*, Saba M, Anderson D, Acosta JM, Borrego ME, **Roberts MH**, Bachyrycz A, Fortune D, Burgos M. Patient perceptions of a tuberculosis testing program provided in the community pharmacy setting. *Public Health*. 2020;181:135-40. PMID: 32014641.
6. Jakeman BJ, Logothetis SJ\*, **Roberts M**, Bachyrycz A, Fortune D, Borrego ME, Ferreira J, Burgos M. Addressing latent tuberculosis treatment through a collaborative care model with community pharmacies and a health department. *Prev Chronic Dis*. 2020;17:E14. PMID: 32053480.
7. Mapel DW, **Roberts MH**, Davis J. Budesonide/formoterol therapy: effective and appropriate use in asthma and chronic obstructive pulmonary disease. *J Comp Eff Res*. 2020;9(4):231-251. PMID: 31983228.
8. **Roberts MH**, Mapel DW, Petersen H. Comparative causal analysis of the effects of long-acting muscarinic antagonist versus no long-acting bronchodilator use on readmission or mortality after hospitalization for chronic obstructive pulmonary disease. *Drugs – Real World Outcomes*. 2020;7:1-17. Epub 2019 Dec 2. doi: 10.1007/s40801-019-00171-w.

9. **Roberts MH**, Erdei E. Comparative United States autoimmune disease rates for 2010-2016 by sex, geographic region, and race. *Autoimmun Rev.* 2020; 10(1):102423. Epub 2019 Nov 14. PMID: 31733367.
10. Barqawi Y\*, Borrego M, **Roberts MH**, Abraham I. Cost-effectiveness model of abiraterone plus prednisone, cabazitaxel plus prednisone and enzalutamide for visceral metastatic castration resistant prostate cancer therapy after docetaxel therapy resistance. *J Med Econ.* 2019;22(11):1202-09. PMID: 31452414.
11. Goldberg E\*, Kindilien S\*, **Roberts M**, Cohen D. Working memory and inadequate micronutrient consumption in healthy seniors. *J Nutr Gerontol Geriatr.* 2019;38(3):247-61. PMID: 31328680.
12. Chen C\*, Borrego ME, **Roberts MH**, Raisch DW. Comparison of post-marketing surveillance approaches regarding infections related to tumor necrosis factor inhibitors (TNFIs) used in treatment of autoimmune diseases. *Expert Opin Drug Saf.* 2019;18(8):733-744. PMID: 31173698.
13. Oglesbee S\*, **Roberts M**, Sapien R. Implementing lower-risk brief resolved unexplained events guideline reduces admissions in a modeled population. *J Eval Clin Pract.* 2020;26(1):343-356. Epub 2019 Jun 7. PMID: 31172653.
14. Logothetis SJ\*, Borrego ME, **Roberts M.**, Bachyrycz A, Timmins GS, Jakeman BJ. Pharmacist perceptions of the New Mexico pharmacist-performed tuberculosis testing program. *J Am Pharm Assoc.* 2018;58(6):647-651. PMID: 30274884
15. Price-Haywood EG, Petersen H, Burton J, Harden-Barrios J, Aduato M, **Roberts M**, Markward N. Outpatient complex case management: health system-tailored risk stratification taxonomy to identify high-cost, high-need patients. *J Gen Intern Med.* 2018;33(11):1921-1927. PMID: 30076572.
16. **Roberts MH**, Takeda MY, Kindilien S\*, Barqawi YK\*, Borrego ME. Assessment of components included in published societal perspective or QALY outcome economic analyses for antiepileptic drug treatment in chronic epilepsy. *Expert Rev Pharmacoecon Outcomes Res.* 2018;18(5):487-503. PMID: 29911955.
17. Kindilien S\*, Goldberg EM\*, **Roberts MH**, Gonzales-Pacheco D. Nutrition status, bone mass density, and selective serotonin reuptake inhibitors. *Prev Med.* 2018;113:62-67. PMID: 29746975.
18. Mapel D, Laliberté F, **Roberts MH**, Sama SR, Sundaresan D, et al. A retrospective study to assess clinical characteristics and time to initiation of open-triple therapy among patients with chronic obstructive pulmonary disease, newly established on long-acting mono- or combination therapy. *Int J Chron Obstruct Pulmon Dis.* 2017;12:1825-1836. PMID: 28684905.
19. **Roberts MH**, Clerisme-Beaty E, Kozma CM, Paris A, Slaton T, et al. A retrospective analysis to identify predictors of COPD-related rehospitalization. *BMC Pulm Med.* 2016;16(1):68. PMID: 27130455.
20. Blanchette CM, **Roberts M**, Petersen H, Fuhlbrigge A. Prevalence of depression/anxiety among Medicare beneficiaries with chronic obstructive pulmonary disease and association with acute exacerbations. *Int J Respir Pulm Med.* 2016;3:044. DOI: 10.23937/2378-3516/1410044.
21. **Roberts MH**, Borrego ME, Kharat AA\*, Marshik PL, Mapel DW. Economic evaluations of fluticasone-propionate/salmeterol combination therapy for chronic obstructive pulmonary disease: a review of published studies. *Expert Rev Pharmacoecon Outcomes Res.* 2016;16(2):167-92. PMID: 26839089.

22. **Roberts MH**, Mapel DW, Borrego ME, Raisch DW, Georgopoulos L, et al. Severe COPD exacerbation risk and long-acting bronchodilator treatments: comparison of three observational data analysis methods. *Drugs – Real World Outcomes*. 2015;2(2):163-175. PMID: 27747765.
23. Gessert C, Waring S, Bailey-Davis L, Conway P, **Roberts M**, et al. Rural definition of health: a systematic literature review. *BMC Public Health*. 2015;15:378. PMID: 25879818.
24. **Roberts MH**, Mapel DW, Thomson HN. The impact of chronic pain on direct medical utilization and costs in chronic obstructive pulmonary disease. *Clinicoecon Outcomes Res*. 2015;7:173-84. PMID: 25870513.
25. **Roberts MH**, Mapel DW, Von Worley A, Beene J. Clinical factors, including All Patient Refined Diagnosis Related Group severity, as predictors of early rehospitalization after COPD exacerbation. *Drugs Context*. 2015;4:212278 PMID: 25834619.
26. Kharat AA\*, Borrego ME, Raisch DW, **Roberts MH**, Blanchette CM, et al. Assessing disparities in the receipt of inhaled corticosteroid prescriptions for asthma by Hispanic and non-Hispanic white patients. *Ann Am Thorac Soc*. 2015;12(2):174-83. PMID: 25473731.
27. Mapel DW, **Roberts MH**. Spirometry, the St. George's Respiratory Questionnaire, and other clinical measures as predictors of medical costs and COPD exacerbation events in a prospective cohort. *The Southwest Respiratory and Critical Care Chronicles*. 2015; 3(10):1-9.
28. Mapel DW, **Roberts MH**. Management of asthma and chronic obstructive pulmonary disease with combination inhaled corticosteroids and long-acting  $\beta$ -agonists: a review of comparative effectiveness research. *Drugs*. 2014;74(7):737-55. PMID: 24797158.
29. Blanchette CM, Dekoven M, De AP, **Roberts M**. Probabilistic data linkage: a case study of comparative effectiveness in COPD. *Drugs Context*. 2013:212258. PMID: 24432045.
30. **Roberts MH**, Mapel DW, Bruse S, Petersen H, Nyunoya T. Development of a modified BODE index as a mortality risk measure among older adults with and without chronic obstructive pulmonary disease. *Am J Epidemiol*. 2013;178(7):1150-60. PMID: 23928262.
31. **Roberts MH**, Mapel DW, Hartry A, Von Worley A, Thomson H. Chronic pain and pain medication use in chronic obstructive pulmonary disease: a cross-sectional study. *Ann Am Thorac Soc*. 2013;10(4):290-8. PMID: 23952846.
32. Mapel D, **Roberts M**, Overhiser A, Mason A. The epidemiology, diagnosis, and cost of dyspepsia and *Helicobacter pylori* gastritis: a case-control analysis in the Southwestern United States. *Helicobacter*. 2013;18(1):54-65. PMID: 23067108.
33. Stanford RH, Blanchette CM, **Roberts MH**, Petersen H, Fuhlbrigge AL. Effect of combination fluticasone propionate and salmeterol or inhaled corticosteroids on asthma-related outcomes in a Medicare-eligible population. *Am J Geriatr Pharmacother*. 2012;10(6):343-51. PMID: 23083688.
34. Lis Y, **Roberts MH**, Kamble S, J Guo J, Raisch DW. Comparisons of Food and Drug Administration and European Medicines Agency risk management implementation for recent pharmaceutical approvals: report of the International Society for Pharmacoeconomics and outcomes research risk benefit management working group. *Value Health*. 2012;15(8):1108-18. PMID: 23244814.
35. Mapel DW, **Roberts MH**. New clinical insights into chronic obstructive pulmonary disease and their implications for pharmacoeconomic analyses. *Pharmacoeconomics*. 2012;30(10):869-85. PMID: 22852587.

36. **Roberts MH**, Mapel DW. Limited lung function: impact of reduced peak expiratory flow on health status, health-care utilization, and expected survival in older adults. *Am J Epidemiol*. 2012;15;176(2):127-34. PMID: 22759722.
37. Parekh A, Marcus R, **Roberts M**, Raisch D. Risks and benefits of direct to consumer advertising on patient-provider relationships—report of the ISPOR direct to consumer advertisements working group. *ISPOR Connections*. 2012;18(3):9-13.
38. **Roberts MH**, Dalal AA. Clinical and economic outcomes in an observational study of COPD maintenance therapies: multivariable regression versus propensity score matching. *Int J Chron Obstruct Pulmon Dis*. 2012;7:221-33. PMID: 22500122.
39. **Roberts M**, Mapel D, Petersen H, Blanchette C, Ramachandran S. Comparative effectiveness of budesonide/formoterol and fluticasone/salmeterol for COPD management. *J Med Econ*. 2011;14(6):769-76. PMID: 21942463.
40. Blanchette CM, **Roberts MH**, Petersen H, Dalal AA, Mapel DW. Economic burden of chronic bronchitis in the United States: a retrospective case-control study. *Int J Chron Obstruct Pulmon Dis*. 2011;6:73-81. PMID: 21311695.
41. Lis Y, Guo JJ, **Roberts MH**, Kamble S, Raisch DW. A comparison of US Food and Drug Administration and European Medicines Agency regulations for pharmaceutical risk management: report of the International Society for Pharmacoeconomic and Outcomes Research Risk Management Working Group. *ISPOR Connections* 2011;17(5):10-13.
42. Dalal AA, **Roberts MH**, Petersen HV, Blanchette CM, Mapel DW. Comparative cost-effectiveness of a fluticasone-propionate/salmeterol combination versus anticholinergics as initial maintenance therapy for chronic obstructive pulmonary disease. *Int J Chron Obstruct Pulmon Dis*. 2010;6:13-22. PMID: 21311689.
43. Dalal AA, St Charles M, Petersen HV, **Roberts MH**, Blanchette CM, et al. Cost-effectiveness of combination fluticasone propionate-salmeterol 250/50 microg versus salmeterol in severe COPD patients. *Int J Chron Obstruct Pulmon Dis*. 2010;5:179-87. PMID: 20714371.
44. Mapel DW, Petersen H, **Roberts MH**, Hurley JS, Frost FJ, et al. Can outpatient pharmacy data identify persons with undiagnosed COPD? *Am J Manag Care*. 2010;16(7):505-12. PMID: 20645666.
45. Roblin DW, **Roberts MH**. Patient dissatisfaction as a determinant of voluntary disenrollment in a managed care organization. *J Ambul Care Manage*. 2010;33(2):163-72. PMID: 20228640.
46. Frost FJ, Tollestrup K, **Roberts M**, Kunde TR, Craun GF, et al. Enteric illness risks before and after water treatment improvements. *J Water Health*. 2009;7(4):581-9. PMID: 19590125.
47. Mapel DW, Frost FJ, Hurley JS, Petersen H, **Roberts M**, et al. An algorithm for the identification of undiagnosed COPD cases using administrative claims data. *J Manag Care Pharm*. 2006;12(6):457-65. PMID: 16925453.
48. Mapel DW, Hurley JS, Roblin D, **Roberts M**, Davis KJ, et al. Survival of COPD patients using inhaled corticosteroids and long-acting beta agonists. *Respir Med*. 2006;100(4):595-609. PMID: 16199151.
49. Hurley JS, **Roberts M**, Solberg LI, Gunter MJ, Nelson WW, et al. Laboratory safety monitoring of chronic medications in ambulatory care settings. *J Gen Intern Med*. 2005;20(4):331-3. PMID: 15857489; PMCID: PMC1490088.
50. Frost FJ, **Roberts M**, Kunde TR, Craun G, Tollestrup K, et al. How clean must our drinking water be: the importance of protective immunity. *J Infect Dis*. 2005;191(5):809-14. PMID: 15688300.

51. Solberg LI, Hurley JS, **Roberts MH**, Nelson WW, Frost FJ, et al. Measuring patient safety in ambulatory care: potential for identifying medical group drug-drug interaction rates using claims data. *Am J Manag Care*. 2004;10(11 Pt 1):753-9. PMID: 15623265.
52. Roblin DW, Howard DH, Becker ER, Kathleen Adams E, **Roberts MH**. Use of midlevel practitioners to achieve labor cost savings in the primary care practice of an MCO. *Health Serv Res*. 2004;39(3):607-26. PMID: 15149481; PMCID: PMC1361027.
53. Roblin DW, Becker ER, Adams EK, Howard DH, **Roberts MH**. Patient satisfaction with primary care: does type of practitioner matter?. *Med Care*. 2004;42(6):579-90. PMID: 15167326.
54. Spyropoulos AC, Frost FJ, Hurley JS, **Roberts M**. Costs and clinical outcomes associated with low-molecular-weight heparin vs unfractionated heparin for perioperative bridging in patients receiving long-term oral anticoagulant therapy. *Chest*. 2004;125(5):1642-50. PMID: 15136371.

#### MANUSCRIPTS IN PREPARATION

1. Shrestha S\*, **Roberts MH**, Maxwell JR, Leeman LM, Bakhireva LN. Post-discharge healthcare utilization in infants with neonatal opioid withdrawal syndrome. *Neurotoxicology and Teratology*. Submitted Nov 2020, minor revisions requested Jan 2021.

#### BOOK CHAPTER

1. Takeda M and **Roberts MH**. Advanced journal club: formulary management. In *Pharmacy Practice Skills: A Guide for Students and Instructors*. Online textbook for AccessPharmacy, expected availability 2021.

#### TECHNICAL AND EVIDENCE REPORTS

1. **Roberts M**, Morrow C, Rafi J\*. Review of Drug Formularies Submitted by Health Insurance Plans Seeking Qualified Health Plan Certification for FY 2019 for Insurance provided on the New Mexico State-based Marketplace on the Federal Platform. For Office of Superintendent of Insurance, New Mexico, September 25, 2018.
2. Morrow C, Rafi J\*, **Roberts M**. Appendix: for Review of Drug Formularies Submitted by Health Insurance Plans Seeking Qualified Health Plan Certification for FY 2018 for Insurance provided on the New Mexico State-based Marketplace on the Federal Platform. For Office of Superintendent of Insurance, New Mexico, May 25, 2018.
3. **Roberts M**, Morrow C, Rafi J\*. Summary of Process for Review of Drug Formularies Submitted by Health Insurance Plans Seeking Qualified Health Plan Certification for FY 2018 for Insurance provided on the New Mexico State-based Marketplace on the Federal Platform. For Office of Superintendent of Insurance, New Mexico, April 26, 2018, updated May 25, 2018.
4. Morrow C, Rafi J\*, **Roberts M**, Georgopoulos L. Review of Drug Formularies Submitted by Health Insurance Plans Seeking Qualified Health Plan Certification for FY 2018 for Insurance provided on the New Mexico State-based Marketplace on the Federal Platform: Evaluation of Vaccine, Contraceptive and Other Preventive Care Coverage. For Office of Superintendent of Insurance, New Mexico, March 15, 2018, updated April 26, 2018.
5. Morrow C, Rafi J\*, **Roberts M**, Georgopoulos L. Review of Drug Formularies Submitted by Health Insurance Plans Seeking Qualified Health Plan Certification for FY 2018 for Insurance provided on the New Mexico State-based Marketplace on the Federal Platform: Category & Class Count Review: Summary by Carrier; Clinical Appropriateness: Non-discrimination review for comprehensiveness of coverage of drugs associated with 9 conditions. For Office of Superintendent of Insurance, New Mexico, March 15, 2018, updated April 26, 2018.

6. Morrow C, Rafi J\*, **Roberts M**. Review of Drug Formularies Submitted by Health Insurance Plans Seeking Qualified Health Plan Certification for FY 2018 for Insurance provided on the New Mexico State-based Marketplace on the Federal Platform. For Office of Superintendent of Insurance, New Mexico, November 30, 2017.
7. **Roberts M**, Diaz Fuentes C, Barin O\*, Osterfoss M, Edwardson N, He X\*, Cacari-Stone L. Cost Sharing Trends in Medicaid and non- Medicaid Expansion States for Benchmark Silver Plans. For Office of Superintendent of Insurance, New Mexico, September 30, 2017, updated January 1, 2018.
8. Edwardson N, He X\*, Osterfoss M, Diaz Fuentes C, **Roberts M**, Cacari-Stone L. Healthcare Coverage Pathways for the Continuously Uninsured in 2013: A Longitudinal Analysis of Demographics, Disease, Utilization, and Expenses. For Office of Superintendent of Insurance, New Mexico, September 30, 2017, updated January 1, 2018.
9. Diaz Fuentes C, Barin O\*, **Roberts M**, Cacari-Stone L Marketplace Enrollment by County/Rural Areas and Spanish Speakers for Medicaid and non- Medicaid Expansion States. For Office of Superintendent of Insurance, New Mexico, September 30, 2017, updated January 1, 2018.
10. Barin O\*, **Roberts M**, Diaz Fuentes C, Osterfoss M, Cacari-Stone L. Premiums and Networks of Marketplace Silver Benchmark Plans. For Office of Superintendent of Insurance, New Mexico, September 30, 2017, updated January 1, 2018.
11. **Roberts MH**, Von Worley A. Evidence review report: MYH9-related disorder diagnosis using genetic testing MYH9 mutation genetic testing. For Presbyterian Health Plan, Albuquerque, New Mexico. February 22, 2013.
12. **Roberts MH**, Von Worley A. Evidence review report: Cell free fetal DNA in maternal blood for prenatal chromosomal abnormality screening. For Presbyterian Health Plan, Albuquerque, New Mexico. February 14, 2013.
13. **Roberts MH**, Von Worley A. Evidence review report: Repetitive transcranial magnetic stimulation therapy for treatment resistant depression. For Presbyterian Health Plan, Albuquerque, New Mexico. February 10, 2012.
14. **Roberts MH**. Technical report: Evaluation of York Health Economics Consortium Hib meningococcal CY and meningococcal ACWY vaccination economic model. For Global Health Outcomes, GlaxoSmithKline, Philadelphia, Pennsylvania. January 2, 2011.
15. **Roberts MH**. Technical report: Economic impact of vaccination against neisseria meningitis serogroup B. For Global Health Outcomes, GlaxoSmithKline, Philadelphia, Pennsylvania. October 22, 2010.

#### INVITED TALKS

1. **Roberts MH**. Comparative Effectiveness Methods in Respiratory Research. Society of Clinical Research Associates (SoCRA) 21<sup>st</sup> Annual Conference, Las Vegas, Nevada. September 21-23, 2012.

#### ORAL PRESENTATIONS, PROFESSIONAL MEETINGS (PRESENTER UNDERLINED)

1. Bakhireva LN, Ruyak S, **Roberts M**, Rodriguez D, Leeman L, Stephen J, Maxwell J. Multi-modal assessment of stress-reactivity & self-regulation in the newborn period in a prospective cohort study of moderate alcohol exposure. Society for Birth Defects Research & Prevention, Platform presentation, 2020 Virtual 60th Annual Meeting.
2. Edwardson N, Fuentes CD, **Roberts M**, Shende D. Marketplace Insurance in New Mexico: Coverage, Continuity, Consumption & Competition. New Mexico Public Health Association Annual Conference, October 2020, Online Conference Presentation.



3. **Roberts M**, New Mexico Legislative Health and Human Services Committee, "Health Insurance Market Update - Cost Sharing and Premiums," State Capital, Santa Fe, NM, United States. November 2, 2017.
4. **Roberts MH**, Mapel DW, Hartry A, Von Worley A, Thomson H. Chronic pain among individuals with COPD as compared to other chronic diseases. American Thoracic Society International Conference, Philadelphia, PA, May 2013.
5. **Gessert CE**, Waring SC, Conway P, **Roberts M**, Bailey-Davis L, VanWormer J. Do rural and urban elders define 'health' differently? 65th Annual Gerontological Society of America Conference, San Diego, CA, November 2012.
6. **Gessert CE**, Waring S, Conway P, **Roberts M**, Bailey-Davis L, VanWormer J. Do rural and urban populations define 'health' differently? 140th Annual American Public Health Association Conference, San Francisco, CA, October 2012.
7. Steimel L, **Roberts M**, Smith D. Pathways to a healthy Bernalillo County: structural assessment of a community service network. New Mexico Public Health Association and University of New Mexico National Health Disparities 2012 Joint Conference, Albuquerque, NM, April 2012.
8. **Tysseling JC**, **Roberts MH**. Potential disincentives in regional emissions trading schemes to implementing distributed energy systems to reduce GHG emissions. 32<sup>nd</sup> IAEE International Conference, Energy, Economy, Environment: The Global View, June 2009.
9. **Roblin DW**, Kaplan SH, Greenfield S, **Roberts MH**, Jackobs LD, Carlton DG. Collaborative Clinical Culture and Primary Care Outcomes. Paper presented at the Academy of Health Services Research and Health Policy, Annual Research Meeting, Washington, DC, 2002.

#### POSTER DISCUSSION PRESENTATIONS, PROFESSIONAL MEETINGS (PRESENTER UNDERLINED)

1. **Stanford R**, Mapel D, **Roberts M**, Pilon D, Laliberte F, Lefebvre P, Sama S, Edmond B, Duh MS. 2017. "A prospective assessment of the mMRC and CAT as predictors of healthcare utilization and costs." American Thoracic Society International Conference [poster discussion session], Washington, DC, May 2017.
2. **Roberts MH**, Mapel DW, and Petersen H. 2016. "Comparative effectiveness of tiotropium compared to no long-acting bronchodilator after a hospitalization for COPD." American Thoracic Society International Conference [poster discussion session], San Francisco, CA, May 2016.
3. **Roberts MH**, Mapel DW, Borrego M, Raisch DW, Georgopoulos L, van der Goes D. Marginal structural models as compared to intent to treat and as protocol methods for examining severe exacerbation risk among COPD patients treated with long-acting bronchodilators. American Thoracic Society International Conference [poster discussion session], San Francisco, May 2014.
4. **Roberts MH**, **Mapel DW**, Hartry A, Von Worley A, Thomson H. The impact of chronic pain on healthcare utilization and cost among persons with COPD. American Thoracic Society International Conference [poster discussion session], Philadelphia, PA, May 2013. [*also highlighted in Media*]

#### POSTER PRESENTATIONS, PROFESSIONAL MEETINGS (PRESENTER UNDERLINED)

1. **Rodriguez D**, **Roberts M**, Ma X, Marquez LE, Stacy L, Ruyak S, Beauchamp KG, Maclean P, Bakhireva LN. Maternal distress, social support, and alcohol use in pregnancy. Research Society on Alcoholism (RSA)/International Society for Biomedical Research on Alcoholism (ISBRA), Annual Conference, Online June 2020.
2. **Maxwell JR**, Ruyak S, **Roberts M**, Ma X, Beauchamp K, Rodriguez D, Marquez LE, Bakhireva LN. Moderate prenatal alcohol exposure and infant heart rate variability measures following birth.

Research Society on Alcoholism (RSA)/International Society for Biomedical Research on Alcoholism (ISBRA), Annual Conference, Online June 2020.

3. Pham N-Y\*, Yon C\*, Anderson JR, Dodd MA, **Roberts M**, Yang S, Ray G. Description, awareness, and perceptions of advanced practice pharmacists in New Mexico: cross-sectional surveys of pharmacist clinicians and other healthcare providers. ASHP Midyear Meeting, Las Vegas, NM, December 2019.
4. **Roberts MH**, He X\*, Edwardson N, Diaz Fuentes C. Factors associated with subscriber turnover for Marketplace insurance carriers. Academy Health 2019, Washington, DC, June 2019.
5. Kharat, AA\*, **Roberts M**, Marshik PL, Garg V, Borrego ME. (2018). PRS11 - Healthcare costs among patients with chronic obstructive pulmonary disease (COPD) and concurrent long-term use of prescription opioids: A retrospective claims analysis. ISPOR 2019, New Orleans, Louisiana, May 2019.
6. Kharat, AA\*, **Roberts M**, Marshik PL, Garg V, Borrego ME. (2018). PRS65 - Assessing the impact of concurrent prescription opioid use on adherence to maintenance medications among patients with chronic obstructive pulmonary disease (COPD): A retrospective claims analysis. ISPOR Europe 2018, Barcelona, Spain, November 2018.
7. Barqawi Y\*, **Roberts M**, Borrego M, Abraham I. PCN101 – Cost-effectiveness analysis of Enzalutamide, Abiraterone acetate plus prednisone and cabazitaxel plus prednisone for the treatment of visceral Metastatic Castration Resistant Prostate Cancer (mCRPC) after Docetaxel Therapy. ISPOR 2019, New Orleans, Louisiana, May 2019.
8. Barqawi Y\*, **Roberts M**, Borrego M, Abraham I. Cost-effectiveness analysis of Enzalutamide, Abiraterone acetate plus prednisone and Cabazitaxel plus prednisone for the treatment of visceral Metastatic Castration Resistant Prostate Cancer (mCRPC) after Docetaxel Therapy. University of New Mexico Shared Knowledge Conference. Albuquerque, NM, November 2018.
9. Kindilien S\*, Goldberg E, **Roberts M**, Gonzales-Pacheco D. Selective serotonin reuptake inhibitors and bone mass density. ISPOR 2018 Annual International Meeting, Baltimore, MD, May 2018.
10. Jakeman B, Logothetis S\*, Bachyrycz A, Borrego M, **Roberts M**, Burgos M. Treatment of Latent Tuberculosis Infection with Rifapentine and Isoniazid in New Mexico Pharmacies. APhA 2018, Nashville, TN, March 2018.
11. Chen C\*, Borrego M, **Roberts M**, Raisch DW. PIN2 – Active versus passive pharmacovigilance: adalimumab-related infections reported in observational studies compared with the FDA’s adverse event reporting system cases. ISPOR 2017, Boston, Massachusetts, May 2017.
12. Blanchette CM, **Roberts M**, Petersen H, Fuhlbrigge A. burden of comorbid depression/anxiety among Medicare beneficiaries with chronic obstructive pulmonary disease. ISPOR 17<sup>th</sup> Annual International Meeting, Washington, DC, June 2012.
13. **Roberts MH**, Mapel DW. Limited lung function: impact of reduced peak expiratory flow on health status, health care utilization, and expected survival in older adults. American Thoracic Society International Conference, San Francisco, CA, May 2012.
14. Mapel DW, **Roberts MH**. Epidemiology of *Helicobacter pylori* and dyspepsia in a U.S. managed care population. American College of Gastroenterology Annual Scientific Meeting, Washington, DC, Oct/Nov 2011.
15. **Roberts M**, Dalal AA. Regression versus propensity matching as outcome and analysis adjustment methods: example using COPD initial therapies. ISPOR 16<sup>th</sup> Annual International Meeting, Baltimore, MD, May 2011.

16. **Roberts M**, Mapel D. Impact of morbidity, psychological distress and lung function on physical functioning in a retired population. ISPOR 16<sup>th</sup> Annual International Meeting, Baltimore, MD, May 2011.
17. **Mapel DW**, **Roberts MH**, Blanchette CM, Ramachandran S: Effectiveness of inhaled corticosteroid/ long-acting  $\beta_2$ -agonist (ICS/LABA) combination therapies among chronic obstructive pulmonary disease (COPD) patients stratified by pre-therapy short-acting  $\beta_2$ -agonist (SABA) use. American Thoracic Society International Conference, Denver, CO, May 2011.
18. **Roberts M**, Borrego M, Petersen H, Kharat A, Blanchette CM: Estimating the burden and course of severe COPD Exacerbations in the U.S. Hispanic population. American Thoracic Society International Conference, Denver, CO, May 2011.
19. **Borrego M**, **Roberts M**, Petersen H, Kharat AA, Blanchette C. Comparison of the burden and cost drivers of COPD hospitalization between Hispanic and White population in the United States. ISPOR 16<sup>th</sup> Annual International Meeting, Baltimore, MD, May 2011.
20. **Cheng Y\***, Raisch DW, **Roberts M**. Literature Review of Risk Factors for Mortality of Patients with Chronic Obstructive Pulmonary Disease. ISPOR 16<sup>th</sup> Annual International Meeting, Baltimore, MD, May 2011.
21. **Dalal AA**, **Roberts MH**, Petersen HV, Blanchette CM, Mapel DW. Comparative effectiveness of fluticasone propionate/salmeterol (250/50mcg) combination and anticholinergics as initial maintenance therapy for chronic obstructive pulmonary disease: a retrospective observational cohort study. ISPOR 16<sup>th</sup> Annual International Meeting, Baltimore, MD, May 2011
22. **de Moor C**, **Roberts M**, McQueeney K\*, Blanchette CM. Comparison of econometric models for estimating cost differences: OLS, gamma, and quantile regression. ISPOR European Congress, Prague, Czech Republic, November 2010.
23. **Blanchette CM**, **Roberts M**, Mapel DW, Petersen H, St. Charles M, Ramachandran S. Comparative effectiveness of budesonide/formoterol fumarate dehydrate combination and fluticasone propionate/salmeterol combination for the management of chronic obstructive pulmonary disease (COPD). American Thoracic Society International Conference, New Orleans, LA, May 2010.
24. **Silver H**, Blanchette CM, **Roberts M**, Petersen H. Prevalence of comorbidities in patients hospitalized for COPD exacerbations and impact on inpatient mortality and hospital expenditures. American Thoracic Society International Conference, New Orleans, LA, May 2010.
25. **Stanford RH**, Fuhlbrigge A, **Roberts M**, Petersen H, Blanchette CM. Effect of combination of fluticasone propionate and salmeterol (FSC) or inhaled corticosteroids (ICS) on asthma related outcomes in a Medicare eligible population. American Thoracic Society International Conference, New Orleans, LA, May 2010.
26. **Roblin D**, Kaplan S, Greenfield S, **Roberts M**. Effects of changing collaborative clinical culture on workforce morale and patient outcomes in the primary practice of an MCO. Academy Health Annual Research Meeting 2003, Nashville, TN, June 2003.

## MEDIA

1. “NM residents spend less than national average on prescription drugs” Stephen Hamway, Albuquerque Journal. Published June 18, 2019. Available at <https://www.abqjournal.com/1330012/nm-residents-spend-less-than-national-average-on-prescription-drugs.html>

2. “Middle-income consumers to feel pinch in open enrollment, experts say” Bruce Krasnow, The Santa Fe New Mexican. Published Nov 2, 2017. Available at <https://www.demingheadlight.com/story/news/local/new-mexico/2017/11/02/middle-income-consumers-feel-pinch-open-health-enrollment-experts-say/826710001>
3. “COPD patients suffer pain ‘on par with arthritis’” Press Association, Nursing Times. Published May 22, 2013. Available at <https://www.nursingtimes.net/clinical-archive/copd/copd-patients-suffer-pain-on-par-with-arthritis-22-05-2013/>
4. “COPD patients suffer pain” Daniel Keller, Medscape Medical News. Published June 3, 2013. Available at [https://www.medscape.com/viewarticle/805219#vp\\_2](https://www.medscape.com/viewarticle/805219#vp_2)

## Research (2016 – Current)

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### CURRENT

- 06/02/2020 – Co- Analysis Group, Inc. / GSK  
 06/01/2021 Investigator *Frequency and economic burden of moderate exacerbations in asthmatic patients treated with inhaled corticosteroids/long-acting beta-agonists (ICS-LABA) in the US – Methodology Phase*  
 Duh, PI, Analysis Group  
 Total Funding: \$45,000
- The objective of this study is to further refine currently available claims-based algorithms for moderate asthma exacerbation and to validate the refined algorithms applied to claims data using chart review as a gold standard.
- 02/13/2020 – PI Sunovion Pharmaceuticals  
 02/13/2021 *A Case-Control Analysis of the Prevalence of Frailty, Cognitive Impairment, and Limited Expiratory Airflow among Elderly Persons with Chronic Obstructive Lung Disease*  
 Total Award: \$40,605
- This study examines, among COPD patients age 50 and older, associations between primary frailty measures and morbidities, chronic conditions, demographics, and other metrics in COPD and matched non-COPD elderly individuals, and 2) in the 2+ years following initial assessment outcomes associated with frailty, such as mortality, hospitalizations, home health care.
- 10/15/2019 – Co- NIH/NIDA  
 03/29/2021 Investigator *6/6 Planning for the HEALthy Early Development Study*  
 Bakhireva (Contact PI) UNM COP/ Leeman UNM SOM/ Stephen MRN  
 Total Award: \$337,500
- This application is awarded as part of the NIH’s Helping to End Addiction Long-term (HEAL) initiative for the developmental/feasibility state of the national HEALthy Brain and Child Development Study (HEALthy BCD).  
 Role: Statistical data analysis and reporting

10/15/2019 – Co- NIH/NIAAA  
08/31/2023 Investigator *ENRICH-2: Stress Reactivity and Self-Regulation in Infants with Prenatal Alcohol Exposure*  
Bakhireva, PI, UNM COP  
Total Award: \$3,336,298

The goal of this competing renewal project is to continue the focus on young children with moderate PAE and to evaluate PAE effects on infant stress reactivity and regulation and the mechanisms underpinning altered HPA axis and ANS functioning, including changes in biological, electrophysiological, and behavioral indices of stress reactivity in 240 maternal-infant pairs.

Role: Statistical data analysis and reporting

#### RECENT PAST RESEARCH (MAJOR PROJECTS)

04/01/2019 – Co-PI beWellnm (New Mexico Health Insurance Exchange)  
03/31/2020 *Benefit Design and Pricing Initiative Project for the New Mexico Office of Superintendent of Insurance*  
Edwardson, Co-PI, UNM School of Public Administration  
Total Award: \$120,000

This study used NM Marketplace insurance claims data across carriers to better understand enrollees movement within and among insurance carriers, and to identify key patterns in utilization, cost of care, re-enrollment, and health outcomes.

10/01/2016 – Site PI Analysis Group, Inc. / GSK  
12/31/2019 Co- *Development and validation of a health insurance claims-based algorithm to*  
Investigator *identify acute exacerbation of chronic obstructive pulmonary disease (AECOPD) event*  
Duh, PI, Analysis Group  
Funding: \$41,800 (UNM COP)

This two-part retrospective multi-site study: 1) developed an algorithm to identify acute exacerbation due to chronic obstructive pulmonary disease (AECOPD) events in health insurance claims databases, and 2) validated it using physician review of abstracted information from electronic medical records (EMR).

01/01/2018 – PI UNM College of Pharmacy (COP) Pilot Program  
12/31/2018 *Estimates of Autoimmune Disease Rates by Race/Ethnicity in the United States*

Roberts, PI; Co-Investigator, Esther Erdei, UNM COP  
Funding: Internal UNM College of Pharmacy pilot funding

Prevalence was estimated, in comparison to a Caucasian population, of common autoimmune disease (AID) rates, and rates of multiple AIDs, among Native Americans and other US minorities considered at higher risk for AID using utilization data from one of the largest US electronic health record databases for the period 2010 through 2016.

- 07/20/2016 – Investigator National Association of Chain Drug Stores Foundation, Inc.  
 12/31/2018 *Patient impact survey of New Mexico pharmacist-performed tuberculosis testing program*  
 Jakeman, PI, UNM COP  
 Total Award: \$70,905  
 This project demonstrated improved patient health outcomes and access to care when tuberculosis (TB) testing and latent TB infection treatment (key strategies for TB prevention) are provided in the community pharmacy setting. This project consisted of two parts: 1) a survey of patients receiving tuberculosis testing in community pharmacies and 2) evaluation of directly observed treatment of latent TB infection in community pharmacies.  
 Role: Statistical data analysis and reporting
- 04/01/2018 – Co-PI New Mexico Office of Superintendent of Insurance  
 09/30/2018 *Benefit Design and Pricing Initiative Project for the New Mexico Office of Superintendent of Insurance*  
 Diaz Fuentes, Co-PI, UNM Economics  
 Total Award: \$150,000  
 This project utilized claims data for Marketplace participants across several years to identify utilization and cost trends of marketplace participants.
- 09/07/2017 – Co- New Mexico Office of Superintendent of Insurance  
 09/30/2018 Investigator New Mexico Marketplace Insurance Carrier Formulary Review  
 Georgopoulos, Morrow, Rafi, Roberts, UNM COP  
 Total Award: \$130,000  
 This effort reviewed 2018 qualified health plan drug formulary plans for New Mexico Marketplace insurance to insure compliance with state and federal drug formulary laws, regulations, and guidance, including, but not limited to: drug formulary adherence to essential health benefits benchmark plan standards, compliance with clinical review standards, and compliance with ACA preventive cost-sharing provisions for pharmaceutical related services.
- 11/01/2016 – Co- New Mexico Office of Superintendent of Insurance  
 09/30/2017 Investigator *Benefit Design and Pricing Initiative Project*  
 Cacari-Stone, PI UNM School of Public Health  
 Total Award: \$300,000  
 To collect, aggregate and analyze ACA Marketplace Exchange health plan benefit design data and publicly available MEPS data to provide insight into how New Mexicans' health plan choices compare to those in other states and the impact of Marketplace insurance on utilization of health care services and cost of services.

- 01/01/2016 – Investigator UNM Medication Therapy Management (MTM) Call Center Initiative  
11/30/2017 (Georgopoulos, Dodd, UNM College of Pharmacy)  
Total Award: \$300,000  
Salary Support: Provided unfunded support  
The medication therapy management (MTM) program is a pharmacist initiative that assists in the management and monitoring of complex patients taking prescription medication. The program objective was to reduce adverse outcomes among these patients. The MTM program is an ongoing program currently conducted from the UNM College of Pharmacy Medication Therapy Management Call Center.  
Role: Statistical data analysis and reporting, assist in design of program evaluation
- 10/13/2016 – Investigator UNM College of Pharmacy, PGY2 Ambulatory Care pharmacy resident  
06/30/2017 research  
*Evaluation of acceptance rates of interventions made by pharmacists in a call center versus pharmacists with prescriptive authority providing face-to-face disease state management*  
Kerwin, Georgopoulos, Dodd, Roberts, Ray, UNM COP  
Unfunded study  
This study evaluated acceptance rates of interventions made by pharmacists working in an MTM call center setting compared to a PhC with prescriptive authority.
- 12/01/2014 – PI Pfizer, Inc.; ASPIRE Investigator Initiated Studies  
06/30/2016 Roberts, PI, Lovelace Clinic Foundation  
*Rheumatoid arthritis and comorbid chronic obstructive or interstitial pulmonary diseases: a retrospective analysis of prevalence and outcomes in a Southwestern managed care population*  
Total Award: \$149,818  
As a systemic disease, rheumatoid arthritis (RA) affects multiple body systems to include the respiratory system. Interstitial lung diseases (ILDs) have long been recognized as manifestations of systemic inflammatory conditions. Chronic obstructive pulmonary disease (COPD) is similarly viewed as a systemic condition. This study's primary objective is to estimate prevalence of RA, COPD, ILD and coexisting RA/COPD or RA/ILD in a Southwestern United States managed care adult population. Secondary objectives are to describe and compare the clinical characteristics and healthcare resource utilization of patients with RA, COPD, ILD, and comorbid RA/COPD or RA/ILD.

#### RESEARCH DEVELOPMENT TRAINING

- Nov 2019 UNM Health Sciences Center CTSC Training, Basic and Advanced REDCap Training  
Instructor: Kevin Wesley
- Jan 2019 – University of New Mexico Clinical & Translational Investigator's Program (CTIP)  
Dec 2020 Monthly Seminar, Albuquerque, NM

Participants in this two-year seminar series engage in scholarly dialogue with other Clinical/Translational researchers and gain experience in providing and accepting critical feedback regarding clinical and translational research, improve presentation skills, receive and incorporate feedback on research design and execution through discussion and critique, and receive and incorporate information on specific topics of interest/advances in research. Each participant delivers two research presentations and one research-related ethics presentation.

- 07/15/2019 UNM Health Sciences Center CTSC Training, *NIH Grantsmanship I*  
 With a focus on best practices in strategy and decision-making, this 2-hour course introduces learners to the key elements involved in a successful NIH grant application.
- 07/03/2019 UNM Health Sciences Center CTSC Training, *AHRQ Grant Basics*  
 This 2-hour course introduces learners to the Agency for Healthcare Research and Quality and its funding priorities.
- Fall 2016 UNM College of Pharmacy *Grant Writing Workshop Seminar*  
 Instructor: Laurie Hudson, PhD  
 This seminar is designed to provide an informal venue for training early career investigators in successful grantsmanship skills and strategies. The objective is to provide a collegial training and mentoring environment, the development of research and scholarly collaborations, and promote professional research career development.

#### PEER REVIEWED JOURNALS (2015 – 2020)

2020 Member, Editorial Board Drugs – Real World Outcomes

#### *Adhoc Journal Reviewer*

2020	2 articles	Drugs – Real World Outcomes
	1 article	Patient Centered Outcomes Research
	1 article	Pharmacoeconomics
2019	1 article	International Journal of COPD
	1 article	Pharmacoeconomics
	3 articles	Respiratory Medicine
2018	1 article	Pharmacoeconomics
2017	1 article	Annals of the American Thoracic Society
	1 article	European Respiratory Journal
	1 article	International Journal of COPD
2016	1 article	COPD Foundation
	1 article	European Respiratory Journal
	1 article	PLOS One
	1 article	Psychiatry Research
	1 article	UK Research Council
	2 articles	Value in Health
2015	1 article	Expert Review of Pharmacoeconomics & Outcomes Research
	4 articles	International Journal of COPD
	1 article	Value in Health



## Teaching

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### CLASSROOM INSTRUCTION – UNIVERSITY OF NEW MEXICO COLLEGE OF PHARMACY

#### PHARMD COURSES

##### *Instructor of Record Courses*

<u>Term</u>	<u>Role</u>	<u>Course</u>
Spr 2018 Spr 2017	Course Instructor	<b>Pharmacy 760 (3 credits): Pharmacy Healthcare Management and Economics</b>
Spr 2016 Spr 2015	Assistant Instructor <i>Pharmacoeconomics</i> unit [8 weeks]	<p>This 16-week course was designed for the 3<sup>rd</sup> year of pharmacy school and covered fundamental concepts in pharmacoeconomic analysis and pharmaceutical management: a basic understanding of resource management and healthcare resource allocation with an emphasis on drug treatments.</p> <p>With the new UNM COP curriculum, it became two 8-week courses: Pharmacy 836 (Pharmacoeconomics, 2 credits) and Pharmacy 837 (Pharmacy Management, 3 credits)</p>
Spr 2020 Spr 2019 Spr 2018	Course Instructor	<b>Pharmacy 836 (2 credits): Pharmacoeconomics</b> <p>This 8-week course for 2<sup>nd</sup> year students is designed to cover fundamental concepts in pharmacoeconomic analysis. It provides a basic understanding of how to manage resources and optimize healthcare resource allocation with an emphasis on drug treatments. Pharmacoeconomic related assignments include a review of a pharmacoeconomic research article.</p>

##### *Lecturer Courses*

<u>Term</u>	<u>Lecture</u>	<u>Course</u>
Fall 2016 Fall 2015	<i>Disease Distribution and Population Trends</i> <i>Economic Principles of Health Care</i>	<b>Pharmacy 707 (3 credits): Pharmacy and Healthcare Delivery</b>
Fall 2015	<i>Health Care Financing Overview</i> <i>Managed Care</i> <i>The Patient Role in Health Care</i> <i>Health Beliefs and Health Behavior Models</i>	<p>This 16-week course was designed for 1<sup>st</sup> year students, providing an overview of the social, economic, and political environments in which health care is currently being delivered to the American public. The role of pharmacists in the health care system and issues related to the practice of pharmacy were emphasized. The course also examined social and behavioral aspects of what it means to be a patient and consumer of health care.</p> <p>With the new UNM COP curriculum, PHRM 707 became an 8-week, 2-credit course: Pharmacy 809 (Pharmacy and Healthcare Delivery).</p>

<u>Term</u>	<u>Lecture</u>	<u>Course</u>
Fall 2016	<i>Comparative</i>	<b>Pharmacy 728 (3 credits): Pharmacy Informatics and Research</b> This 16-week course for 2 <sup>nd</sup> year students provided an appreciation of research and informatics fundamentals; expand and refine the student's understanding of the origins, structure, and function of the biomedical literature; and demonstrate application of research and informatics in pharmacy practice.  With the new UNM COP curriculum, PHRM 728 became an 8-week, 2-credit course: Pharmacy 828 (Pharmacoepidemiology and Research Design).
Fall 2015	<i>Effectiveness Research</i>	
Fall 2016	<i>Medication utilization</i>	
Fall 2015	<i>patterns and use of</i>	
Fall 2014	<i>administrative claims</i>	
Fall 2013	<i>data to assess</i>	
Fall 2011	<i>utilization</i>	
Spr 2018	<i>Formulary</i>	<b>Pharmacy 765L (2 credits): Pharmaceutical Care Lab VI</b> This 16-week course for 3 <sup>rd</sup> year students is the fourth in a series of six courses. This course emphasizes patient assessment, care planning, and monitoring.
Spr 2017	<i>Recommendation Presentations (Guest Reviewer)</i>	
Fall 2020	<i>Economic Principles</i>	<b>Pharmacy 809 (2 credits): Pharmacy and Healthcare Delivery</b> This 8-week course provides 1 <sup>st</sup> year students with an overview of the social, economic, and political environments in which health care is currently being delivered to the American public. The role of pharmacists in the health care system, and issues related to the practice of pharmacy are emphasized.
Fall 2019	<i>of Health Care</i>	
Fall 2018		
Fall 2017		
Fall 2020	<i>Health Care Financing</i>	
Fall 2019	<i>Overview</i>	
Fall 2017		
Spr 2019	<i>Formulary Recommendation Presentations (Guest Reviewer)</i>	<b>Pharmacy 823 (2 credits): Aspects of Patient Care Lab III</b> This 16-week course for 2 <sup>nd</sup> year students focuses on the Pharmacists' Patient Care Plan involving prescription medications, patient history and more complex patient cases.
Spr 2020	<i>Principles of</i>	<b>Pharmacy 837 (3 credits): Pharmacy Management and Operations</b> This 8-week course for 2 <sup>nd</sup> year students explores foundational principles of business operation and management from the perspective of retail, hospital and clinical pharmacy practice settings.
Spr 2019	<i>Financial Analysis</i>	
Spr 2018		

## MASTER'S AND PHD COURSES

### *Instructor of Record Courses*

<u>Term</u>	<u>Role</u>	<u>Course</u>
Spr 2016	Course Instructor	<b>Pharmacy 598 (2 credits): Causal Inference in Observational Studies</b> This 16-week course was a new course offering for graduate students. The course introduces theories and applied methods for pharmaco-economic and health outcomes research, focusing on applied causal inference methods for observational studies. The course includes an applied project involving secondary data analysis.

<u>Term</u>	<u>Role</u>	<u>Course</u>
Fall 2020 Fall 2018 Fall 2015 Spr 2015 Fall 2014	Seminar Instructor	<b>Pharmacy 591 (1 credit): Seminar in Pharmacy Administration (PEPPOR graduate students)</b> The 16-week seminar provides graduate students with a broad knowledge of methods used in conducting pharmaceutical policy, outcomes and clinical trial research. It is a semi-structured forum where participants (students and faculty) present research. Presentations stimulate discussion about current trends in health care, patient outcomes research, social and behavioral pharmacy research, various research methodologies and health policy. The seminar provides students with an opportunity to develop writing and formal oral presentation skills and provides a venue for graduate students and faculty to meet informally and discuss issues relevant to the graduate program and professional field.
Fall 2017 Spr 2017	Co-instructor	
Fall 2013	Guest Lecturer <i>The devil is in the details: good documentation practice</i>	

### Lecturer Courses

<u>Term</u>	<u>Lecture</u>	<u>Course</u>
Fall 2018 Fall 2016 Fall 2014	<i>Decision Analysis / Sensitivity Analysis</i>	<b>Pharmacy 545 (3 credits): Pharmacoeconomics</b> This 16-week course provides students with an overview of the field of pharmacoeconomics and health outcomes research through discussion of the theory, techniques and methodologies used to design, conduct and critique pharmacoeconomic and health outcomes research studies. The course final project is a student developed research study proposal and presentation.
Fall 2014	<i>Economic / Markov Modeling</i>	
Fall 2014	<i>Cost-Utility Analysis</i>	
Fall 2014	<i>Cost Benefit Analysis</i>	<b>Pharmacy 546 (3 credits): Health Care System Review</b> This 16-week course provides students an overview of the health care environment, to include major issues facing pharmacy and health care, and evaluating research in these areas. In-depth discussions are integral to the course. Students conduct a course-related literature review.
Fall 2017 Fall 2015	<i>Health Related Quality of Life Status Measures</i>	
Fall 2015	<i>The Application &amp; Impact of Evidence-Based Practice Guidelines</i>	
Fall 2015	<i>International Perspectives on Health Care</i>	<b>Pharmacy 547 (3 credits): Pharmacy Practice Research</b> This 16-week course provides training in research design and application to the field of pharmacy administration and outcomes research. In addition, the course provides training in statistical methods used in conjunction with various research designs. Key aspects of developing a research proposal are covered, from hypothesis generation to the data analysis plan and power calculations. The course includes an applied project involving secondary data analysis.
Fall 2020	<i>Power/Sample Size</i>	
Spr 2017	<i>Databases &amp; EHRs</i>	
Spr 2015	<i>Publicly available databases</i>	
Spr 2015	<i>Assist in Project Review and Grading</i>	<b>MSCR 561 (1-6 credits): Health Care Economics</b> Overview health care economics and patient outcomes research, health care public policy issues, and evaluation of outcomes research. 8-week course M.S. in Biomedical Sciences with a concentration in Clinical Research (MSCR) program.
Spr 2016	<i>Cost-effectiveness Sensitivity Analyses</i>	

## TEACHING DEVELOPMENT TRAINING

Jun 2019	Small Group Learning Workshop, UNM College of Pharmacy Instructors: Jim Nawarskas, PharmD and Gary Smith, PhD
Feb 2016	Constructing Effective Multiple-Choice Tests Workshop, UNM Instructor: Jay Parkes, PhD

## PHARM D STUDENT ADVISING / MENTORING

### *PharmD Student Faculty Mentor*

Fall 2020 – Spr 2021	10 students	The University of New Mexico College of Pharmacy assigns PharmD students to college faculty so that faculty can periodically meet with students, monitor students' progression toward career and academic goals, and where needed, assist by identifying appropriate college and university resources to support student needs. Students continue with the same faculty member during their matriculation period at UNM.
Fall 2019 – Spr 2020	9 students	
Fall 2018 – Spr 2019	10 students	
Spr 2018	7 students	

### *PharmD Resident Research Project Committees*

2020 – Current	Member	Craig Yon, PharmD Title: <i>Assessing patient perceptions on how the COVID-19 pandemic has impacted their diabetes self-management</i>
2019 – 2020	Member	Ngoc-Yen T. Pham, PharmD Title: <i>Description, awareness, and perceptions of advanced practice pharmacists in New Mexico: cross-sectional surveys of pharmacist clinicians and other healthcare providers</i>
2016 – 2017	Member	Jessica Kerwin, PharmD Title: <i>Evaluation of Acceptance rates of interventions made by pharmacists in a call center versus pharmacists with prescriptive authority providing face-to-face disease state management</i>

## MASTER OF SCIENCE AND/OR DOCTOR OF PHILOSOPHY STUDENT ADVISING / MENTORING

Pharmaceutical Sciences Pharmacoeconomics, Epidemiology, Pharmaceutical Policy and Outcomes Research (PEPPOR) program, University of New Mexico College of Pharmacy

### *Graduate Advisees*

Fall 2020 – Current	Advisor	Neil Goel, BS
Fall 2020 – Current	Advisor	Rana Al Khafaji, MA
Fall 2017 – Spr 2019	Advisor	Shannon Kindilien, MS
Spr 2019 – Fall 2019	Advisor	John Rafi, PharmD, MS

### *Master of Science Committees*

2020	Member	Anslem Omeh, PharmD, MS Paper: <i>Prevalence and Determinants of Risky Opioid Cocktails (ROC) and Risky Opioid Dosing (ROD) Among the U.S Adult Population Using the MEPS Data</i>
2018 – 2019	Chair	John Rafi, PharmD, MS Paper: <i>Statin-associated tendon-rupture: a summary of reports in the Food and Drug Administration's Adverse Event Reporting System (FAERS)</i>
2018	Member	Yazan Barqawi, PharmD, MBA, MS

- Thesis: *Cost effectiveness analysis of enzalutamide, abiraterone plus prednisone and cabazitaxel plus prednisone for the treatment of visceral metastatic castration resistant prostate cancer (mCRPC) after docetaxel therapy*
- 2015 – 2017 Member Cheng Chen, MS  
Thesis: *Comparison of post-marketing surveillance approaches regarding infections related to tumor necrosis factor (TNF) inhibitors*
- 2015 – 2017 Member Renee D Patton, MS  
Thesis: *The evaluation of the effects of the use of the palliative care diagnosis code on risk-adjusted mortality and hospital ranking in patients with severe sepsis*
- 2011 – 2012 Member Akshay Kharat, MS  
Thesis: *Assessing the utilization of inhaled corticosteroids and health care services for asthma by Hispanic and Non-Hispanic white patients using the Medical Expenditure Panel Survey*

#### *PhD Written Comprehensive Examination Committee*

- Fall 2019 Member Yazan Barqawi, MS
- Spr 2018 Chair Shannon Kindilien, MS
- Fall 2017 Member John Rafi, MS  
Cheng Chen, MS  
Anslem Omeh, MS
- Fall 2016 Member Adriana Bautista, MD, MPH  
Ambroshia Murrietta, MPH  
Shikhar Shrestha, MS

#### *PhD Oral Comprehensive Examination Committee*

- 2019 - 2020 Member Yazan Barqawi, MS
- Spr 2019 Co-Chair Shannon Kindilien, MS
- Fall 2018 Member Cheng Chen, MS
- Sum 2018 Member Anslem Omeh, MS
- Spr 2017 Member Shikhar Shrestha, MS

#### *PhD Dissertation Committees*

- 2020 – Current Member Cheng Chen, MS  
Title: *Preferences for pharmacogenomic testing in polypharmacy patients: a discrete choice experiment*
- 2016 – 2019 Member Shikhar Shrestha, MS  
Title: *Assessment of post-discharge health care utilization in infants with neonatal opioid withdrawal syndrome*
- 2015 – 2019 Member Yuebin Zhou, MS (ABD)  
Title: *Patients' preferences for medication therapy management services: a discrete choice experiment*
- 2015 – 2018 Member Akshay Kharat, MS, PhD  
Title: *Assessing the impact of prescription opioid use on adherence and persistence to maintenance medications, healthcare resource utilization and costs among patients with chronic obstructive pulmonary disease (COPD): a retrospective database analysis*

## Service

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### UNIVERSITY OF NEW MEXICO

#### *College of Pharmacy*

Jan 2020 – Current	Vice Chair	<i>Faculty Development Committee</i>
Sep 2019 – Current	Member	<i>Graduate Affairs Committee</i>
Jan 2018 – Current	Faculty Advisor	<i>ISPOR Student Chapter</i>
Nov 2019 – Mar 2020	Chair	<i>Assistant Professor Faculty Search Committee, PPAS</i>
Sep 2018 – Apr 2019	Member	<i>Assistant Professor Faculty Search Committee, PPAS</i>
2017 – 2020	Interviewer	<i>Multiple Mini Interview (MMI) for prospective PharmD students</i>
Spr 2017 – 2019	Judge	<i>Research Day (each May)</i>

#### *Health Sciences Center*

Fall 2019 - Current	Member	<i>Truven/HealthFacts User Group Committee</i>
Fall 2016 – Spr 2017	Member	<i>UNM Health Data Request Committee</i>
Summer 2015	Member	<i>CTSC Database Evaluation Committee</i>

#### *University of New Mexico*

Fall 2018 – Current	Member	<i>UNM Faculty Senate Budget Committee</i>
Fall 2017 – Spr 2019	Member	<i>UNM Senate Graduate and Professional Committee (SGPC)</i>
	Member	<i>SGPC Scholarships/Awards Subcommittee</i>

### NATIONAL SERVICE

#### *Patient Centered Outcomes Research Institute (PCORI), Scientific Reviewer*

2020 Fall	<i>PCORI Merit Review Panel: Observational Analyses of Second-Line Pharmacological Agents in Type 2 Diabetes</i>	
2020 Summer	<i>PCORI Merit Review Panel: COVID-19 targeted PCORI Funding</i>	

### PROFESSIONAL SOCIETY SERVICE

#### *International Society for Pharmacoeconomics and Outcomes Research (ISPOR)*

2020 – Current	Co-chair	<i>Faculty Advisor Council Fellowship Focus Group</i>
2018 – Current	Member	<i>Faculty Advisor Council</i>
2012 – Current	Member	<i>Medication Adherence and Persistence Review Group</i>
2017 – 2019	Member	<i>Competency Assessment Working Group</i>
May 2017	Faculty Participant	<i>Behavioral Economics. Faculty Student Roundtable, 2017</i>
2010 – 2012	Member	<i>ISPOR International Conference, Washington, DC</i> <i>Risk and Benefits Special Interest Group</i>

#### *American Thoracic Society (ATS)*

2017 – 2020	Member	<i>Behavioral Science and Health Services Research (BSHSR) Assembly International Conference Committee</i>
May 2019	Moderator	<i>2019 ATS International Conference, Dallas, Texas</i> <i>Mini Symposium “Paying for care in pulmonary disease”</i>
May 2018	Facilitator	<i>Thematic Poster Session (C42) Contemporary topics in COPD. 2018 ATS International Conference, San Diego, CA</i>
2012 – 2018	Member	<i>Behavioral Science and Health Services Research (BSHSR) Web Committee</i>