

ANDREW R. ZULLO, Pharm.D., Ph.D.

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Brown University School of Public Health
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1. DATE OF PREPARATION

February 16th, 2018

2. EDUCATION

Ph.D. (Pharmacoepidemiology) 2012-2017
Department of Health Services, Policy, and Practice Providence, Rhode Island
Brown University

- Thesis: Use, safety, and effectiveness of diabetes medications in older nursing home residents.
- Advisor: Dr. David Dore

Sc.M. (Epidemiology) 2012-2015
Department of Epidemiology Providence, Rhode Island
Brown University

- Thesis: Estimating the effect of health insurance on personal prescription drug importation.
- Advisor: Dr. Chanelle Howe

Pharm.D. (Clinical Pharmacy) 2006-2012
School of Pharmacy Piscataway, New Jersey
Rutgers University

3. POSTDOCTORAL TRAINING

Postdoctoral Research Fellow Oct 2017 – Present
Center of Innovation in Long-Term Services and Supports Providence, Rhode Island
Providence Veterans Affairs Medical Center

- Advisors: Drs. Amal Trivedi & Kerry LaPlante

Postdoctoral Research Fellow Sep 2015 – Present
Center for Evidence Synthesis in Health Providence, Rhode Island
Brown University

- Advisors: Drs. Thomas Trikalinos, Ethan Balk & Issa Dahabreh

4. EMPLOYMENT RECORD

Assistant Professor Oct 2017 – Present
Investigator Sep 2015 – Sep 2017
Research Assistant Aug 2013 – Aug 2015
Department of Health Services, Policy, and Practice Providence, Rhode Island
Brown University School of Public Health

Assistant Professor Oct 2017 – Present
Department of Epidemiology Providence, Rhode Island
Brown University School of Public Health

Clinical Pharmacist Specialist Sep 2015 – Present
Staff Pharmacist Aug 2012 – Aug 2015
Department of Pharmacy Providence, Rhode Island
Rhode Island Hospital/Hasbro Children’s Hospital

Adjunct Assistant Professor Sep 2016 – Present
School of Pharmacy Storrs, Connecticut
University of Connecticut

Adjunct Assistant Professor Sep 2016 – Present
College of Pharmacy Kingston, Rhode Island
University of Rhode Island

Intern May 2010 – Dec 2010
Department of Drug Information Woodcliff Lake, New Jersey
Eisai Pharmaceuticals

5. MEMBERSHIPS IN PROFESSIONAL ORGANIZATIONS & SOCIETIES

- 1) International Society for Pharmacoepidemiology 2013 – present
- 2) American Geriatrics Society 2015 – present
- 3) American Society of Health-System Pharmacists 2010 – present
- 4) Society for Epidemiologic Research 2013 – present

6. PUBLICATIONS

A. BOOK CHAPTERS

1) None.

B. REFEREED JOURNAL ARTICLES

- 1) Olszewski AJ, **Zullo AR**, Nering CR, Huynh JP. Use of charity financial assistance for novel oral anti-cancer agents. *Journal of Oncology Practice*. DOI: 10.1200/JOP.2017.027896.
- 2) Lefebvre A, **Zullo AR**, Dapaah-Afriyie R, Berard-Collins C, Elsaid K. Outcomes of a pharmacist-managed clinic for underserved patients with uncontrolled type 2 diabetes mellitus. *Journal of Pharmacy Practice and Research*. 2018;48(1):65-71.
- 3) McAuliffe L, **Zullo AR**, Dapaah-Afriyie R, Collins C. Development and validation of the MEDCOINS transitions of care pharmacist tool to predict potentially avoidable 30-day readmissions. *American Journal of Health-System Pharmacy*. 2018;75(3):111-119.
- 4) **Zullo AR**, Zhang T, Banerjee G, Lee Y, McConeghy KW, Kiel DP, Daiello LA, Mor V, Berry SD. Facility and State Variation in Hip Fracture among US Nursing Home Residents. *Journal of the American Geriatrics Society*. 2018 (ePub ahead of print). DOI: 10.1111/jgs.15264.
- 5) Thomas KS, KS, Parikh RB, **Zullo AR**, Dosa D. Home-delivered meals and risk of self-reported falls: results from a randomized trial. *Journal of Applied Gerontology*. 2018;37(1):41-57.
- 6) **Zullo AR**, Zhang T, Beaudoin FL, Lee Y, McConeghy KW, Kiel DP, Daiello LA, Mor V, Berry SD. Pain Treatments after Hip Fracture among Older Nursing Home Residents. *Journal of the American Medical Directors Association*. 2018;19(2):174-176.
- 7) McConeghy KW, Berry SD, Lee Y, **Zullo AR**, Banerjee G, Daiello LA, Dosa D, Kiel DP, Mor V. Influenza illness and hip fracture hospitalizations in nursing home residents: are they related? *Journals of Gerontology: Medical Sciences*. 2017 (ePub ahead of print). DOI: 10.1093/gerona/glx200.
- 8) **Zullo AR**, Gray SL, Holmes HM, Marcum ZA. Screening for medication appropriateness in older adults. *Clinics in Geriatric Medicine*. 2018;34(1):39-54.
- 9) Berry SD, **Zullo AR**, Lee Y, Mor V, McConeghy KW, Banerjee G, D'Agostino RB, Daiello L, Dosa D, Kiel DP. Fracture Risk Assessment in Long term care (FRAiL): development and validation of a prediction model. *Journal of Gerontology: Medical Sciences*. 2017 (ePub ahead of print). DOI: 10.1093/gerona/glx147.
- 10) Dore DD, **Zullo AR**, Lee Y, Mor V, Berry SD. Age, sex, and dose effects of non-benzodiazepine hypnotics on hip fracture in nursing home residents. *Journal of the American Medical Directors Association*. 2017 (ePub ahead of print). DOI: 10.1016/j.jamda.2017.09.015.

- 11) **Zullo AR**, Sharmin S, Lee Y, Daiello LA, Shah NR, Boscardin WJ, Dore DD, Lee SJ, Steinman MA. Secondary prevention medication use after myocardial infarction among U.S. nursing home residents. *Journal of the American Geriatrics Society*. 2017;65(11):2397-2404.
- 12) **Zullo AR**, Dore DD, Gutman R, Mor V, Alvarez CA, Smith RJ. Metformin safety warnings and diabetes drug prescribing patterns for older nursing home residents. *Journal of the American Medical Directors Association*. 2017;18(10):879-884.
- 13) Berry SD, **Zullo AR**, McConeghy K, Lee Y, Daiello L, Kiel DP. Defining hip fracture with claims data: outpatient and provider claims matter. *Osteoporosis International*. 2017;28(7):2233-2237.
- 14) Steinman MA, **Zullo AR**, Lee Y, Boscardin WJ, Dore DD, Gan S, Fung K, Miao Y, Lee SJ, Covinsky KE, Komaiko KDR, Mor V. Association of β -blockers with functional outcomes, death, and rehospitalization in older nursing home residents after acute myocardial infarction. *JAMA Internal Medicine*. 2017;177(2):254-262.
- 15) Fain KM, Alexander GC, Dore DD, Segal JB, **Zullo AR**, Castillo-Salgado C. Frequency and predictors of analgesic prescribing in U.S. nursing home residents with persistent pain. *Journal of the American Geriatrics Society*. 2017;65(2):286-293.
- 16) Bunnell KL, **Zullo AR**, Collins C, Adams CA. Methicillin-resistant *Staphylococcus aureus* pneumonia in critically ill trauma and burn patients: a retrospective cohort study. *Surgical Infections*. 2017;18(2):196-201.
- 17) **Zullo AR**, Lee Y, Daiello L, Mor V, Boscardin WJ, Miao Y, Komaiko K, Steinman MA. Beta-blocker use among United States nursing home residents after myocardial infarction: a national study. *Journal of the American Geriatrics Society*. 2017;65(4):754-762.
- 18) Fain KM, Castillo-Salgado C, Dore DD, Segal JB, **Zullo AR**, Alexander GC. Inappropriate fentanyl prescribing among nursing home residents in the United States. *Journal of the American Medical Directors Association*. 2017;18(2):138-144.
- 19) Gao TY, Howe CJ, **Zullo AR**, Marshall BDL. Risk factors for self-report of not receiving an HIV test among adolescents in NYC with a history of sexual intercourse, 2013 YRBS. *Vulnerable Children and Youth Studies*. 2016;12(4):277-291.
- 20) **Zullo AR**, Dore DD, Gutman R, Mor V, Smith RJ. National glucose-lowering treatment complexity is greater among nursing home residents than community-dwelling adults. *Journal of the American Geriatrics Society*. 2016;64(11):e233-e235.
- 21) Banerjee G, **Zullo AR**, Berry SD, Lee Y, McConeghy K, Kiel DP, Mor V. Geographic variation in hip fracture among U.S. long-stay nursing home residents. *Journal of the American Medical Directors Association*. 2016;17(9):865.e1-3.

- 22) **Zullo AR**, Dore DD, Daiello L, Baier RR, Gutman R, Gifford DR, Smith RJ. National trends in treatment initiation for nursing home residents with diabetes mellitus, 2008-2010. *Journal of the American Medical Directors Association*. 2016;17(7):602-608.
- 23) Berry SD, Lee Y, **Zullo AR**, Kiel DP, Dosa D, Mor V. Incidence of hip fracture in U.S. nursing homes. *The Journals of Gerontology: Series A*. 2016;71(9):1230-1234.
- 24) Mahmoud L, **Zullo AR**, McKaig D, Berard-Collins CM. Concordance between activated partial thromboplastin time and antifactor Xa assay for monitoring unfractionated heparin in hospitalized hyperbilirubinemic patients. *Rhode Island Medical Journal*. 2016;99(3):33-37.
- 25) **Zullo AR**, Howe CJ, Galárraga O. Estimating the effect of health insurance on personal prescription drug importation. *Medical Care Research and Review*. 2016;74(2):178-207.
- 26) Kenna J, Mahmoud L, **Zullo AR**, Potter NS, Fehnel CR, Thompson BB, Wendell LC. Effect of probiotics on the incidence of healthcare-associated infections in mechanically ventilated neurocritical care patients. *Nutrition in Clinical Practice*. 2016;31(1):116-120.
- 27) Migliozi D, **Zullo AR**, Berard-Collins CM, Elsaid K. Achieving blood pressure control among renal transplant recipients by integrating electronic health technology and clinical pharmacy services. *American Journal of Health-System Pharmacy*. 2015;72(22):1987-1992.
- 28) **Zullo AR**, Caine K, Galárraga O. The dollars and sense of economic incentives to modify HIV-related behaviours. *Journal of the International AIDS Society*. 2015;18:20724.
- 29) **Zullo AR**, Dore DD, Galarraga O. Development and validation of an index to predict personal prescription drug importation by adults in the United States. *Journal of Pharmaceutical Health Services Research*. 2015;6(1):33-41.

C. COMMENTARIES & EDITORIALS

- 30) Berry SD, **Zullo AR**, McConeghy K, Lee Y, Daiello L, Kiel DP. Administrative health data: guilty until proven innocent – Response to comments by Levy and Sobolev. *Osteoporosis International*. 2017 (ePub ahead of print). DOI: 10.1007/s00198-017-4244-4.
- 31) **Zullo AR**. Capsule Commentary on McCoy Et al. Hospital Readmissions Among Commercially-Insured and Medicare Advantage Beneficiaries with Diabetes and the Impact of Severe Hypoglycemic and Hyperglycemic Events. *J Gen Intern Med*. 2017 (ePub ahead of print). DOI: 10.1007/s11606-017-4109-8.

D. WORK UNDER REVIEW

- 32) Zhang T, **Zullo AR**, Shireman TI, Lee Y, Mor V, Liu Q, McConeghy KW, Daiello LA, Kiel DP, Berry SD. Risk factors for hip fracture in nursing home residents with multiple sclerosis. (Submitted to *Multiple Sclerosis Journal*).
- 33) **Zullo AR**, Olean M, Berry SD, Lee Y, Tjia J, Steinman MA. Adverse Events of β -blockers in Older Nursing Home Residents after Acute Myocardial Infarction. (Submitted to *JAMA Cardiology*).
- 34) Mahmoud LN, **Zullo AR**, Thompson BB, Wendell LC. Outcomes of protocolized analgesia and sedation in neurocritical care. (Submitted to *Anesthesia & Analgesia*).
- 35) **Zullo AR**, Hersey M, Lee Y, Sharmin S, Bosco E, Daiello LA, Shah NR, Mor V, Boscard WJ, Berard-Collins CM, Dore DD, Steinman MA. Outcomes of “diabetes-friendly” versus “diabetes-unfriendly” beta-blockers in older nursing home residents with diabetes after acute myocardial infarction. (Submitted to *American Heart Journal*).
- 36) **Zullo AR**, Lou U, Cabral S, Huynh J, Berard-Collins CM. Overuse and underuse of pegfilgrastim for primary prophylaxis of febrile neutropenia. (Submitted to *Journal of Oncology Pharmacy Practice*).
- 37) Yankulina O, **Zullo AR**, Cabral SE, Huynh JP, Lopresti ML, Fenton MA. Pertuzumab-associated diarrhea in HER2/neu positive breast cancer patients: a comparison of trials to actual practice. (Submitted to *Journal of Oncology Pharmacy Practice*).

E. ABSTRACTS (SELECTED)

- 1) **Zullo AR**, Kiel DP, Berry SD. Effect of Bisphosphonates on Nonvertebral Fracture among Older Nursing Home Residents. American Geriatrics Society Annual Meeting, Orlando, FL. May 4, 2017. Abstract no. 289280.
- 2) Amir O, Zhang T, **Zullo AR**, Kiel DP, Berry SD. Incidence of hip fracture in Native American residents of U.S. nursing homes. American Geriatrics Society Annual Meeting, Orlando, FL. May 4, 2017. Abstract no. 2923112.
- 3) Zhang T, **Zullo AR**, Shireman T. Temporal trends in age and function for newly admitted long-stay nursing home residents with multiple sclerosis. American Geriatrics Society Annual Meeting, Orlando, FL. May 4, 2017.
- 4) Zhang T, Liu Q, Daiello L, **Zullo AR**, Lee Y, Mor V, McConeghy KW, Kiel DP, Berry SD. Prescription drug burden and hip fracture risk in nursing home residents. American Geriatrics Society Annual Meeting, Orlando, FL. May 4, 2017.
- 5) Nolan K, **Zullo AR**, Bosco E, Marchese C, Berard-Collins C. Controlled Substance Diversion in Health Systems: Failure Mode and Effects Analysis for Prevention. American Society of

Health-System Pharmacy Midyear Clinical Meeting, Orlando, FL. December 4, 2017. Abstract no. 334998.

- 6) Olean MS, **Zullo AR**, Berry SD, Lee Y, Steinman MA. Adverse effects of beta-blockers in older nursing home residents after acute myocardial infarction. American Society of Health-System Pharmacy Midyear Clinical Meeting, Orlando, FL. December 5, 2017. Abstract no. 389708.
- 7) Previte M, **Zullo AR**, Beaulieu J, Collins C. Patterns of sugammadex use for the reversal of short-acting non-depolarizing neuromuscular blocking agents. American Society of Health-System Pharmacy Midyear Clinical Meeting, Orlando, FL. December 5, 2017. Abstract no. 396876.
- 8) Ortega A, **Zullo AR**, Huynh JP, Brunault R, Berard-Collins C. Discontinuation of medications after advanced cancer diagnosis in older nursing home residents. Vizient University Health System Consortium Meeting, Orlando, FL. December 2, 2017.
- 9) Corsi K, **Zullo AR**, Mogul A, Dapaah-Afriyie R, Collins C. Subgroup effects of secondary prevention medication use among older nursing home residents after acute myocardial infarction. Vizient University Health System Consortium Meeting, Orlando, FL. December 2, 2017.
- 10) Mogul A, **Zullo AR**, Corsi K, Dapaah-Afriyie R, Collins C. Effect of secondary prevention medication use on functional outcomes, death, and rehospitalization in older nursing home residents after acute myocardial infarction. Vizient University Health System Consortium Meeting, Orlando, FL. December 2, 2017.
- 11) Shangani S, Operario O, **Zullo AR**, Howe C. Prevalence and predictors of concurrent sexual partnerships among sexually active men in Kenya. American Public Health Association Annual Meeting, Atlanta, Georgia. November 6, 2017.
- 12) Berry SD, **Zullo AR**, Zhang T, Lee Y, Banerjee G, Daiello L, McConeghy K, Dosa D, Mor V, Kiel DP. Bisphosphonate Prescriptions May Reduce Fracture Risk in Older Nursing Home (NH) Residents. American Society for Bone and Mineral Research, Denver, CO. September 2017.
- 13) Sharmin S, **Zullo AR**, Daiello LA, Zhang T, Shireman TI. Dose- and Drug-Specific Effects of Sulfonylureas on Hypoglycemia and Cardiovascular Events in Older Nursing Home Residents. Brown University Public Health Research Day, Providence, RI. April 2017.
- 14) Brunault R, **Zullo AR**, Huynh JP, Liauw JC, Berard-Collins C. Managing diabetes mellitus in nursing home residents with advanced cancer: a national study. Brown University Public Health Research Day, Providence, RI. April 2017.
- 15) Shangani S, Operario D, **Zullo AR**, Kirwa K, Howe C. Prevalence and predictors of concurrent sexual partnerships among sexually active men in Kenya. American Public Health Association Annual Meeting, Atlanta, GA. November 2017.

- 16) **Zullo AR**, Beaulieu J, Berard-Collins C. Effect of drug shortage mitigation strategies on time to ampicillin/sulbactam administration. American Society for Health-system Pharmacists Midyear Clinical Meeting, Las Vegas, NV. December 2016.
- 17) Mahmoud L, **Zullo AR**, Fehnel CR, Thompson BB, Wendell L. Age-specific effects of an analgesia and sedation protocol in neurocritical care patients. American Society for Health-system Pharmacists Midyear Clinical Meeting, Las Vegas, NV. December 2016.
- 18) Greene R, **Zullo AR**, Berard-Collins C. Effect of pharmacist interventions on drug cost savings in a collaborative, unit-based practice model. American Society for Health-system Pharmacists Midyear Clinical Meeting, Las Vegas, NV. December 2016.
- 19) Adams J, Howe C, **Zullo AR**, Marshall BDL, Akilah K. Estimating the Impact of Intervening on Adolescent Binge Drinking on Neighborhood-based Disparities in HIV/STI Prevalence: A Causal Mediation Analysis, Society for Adolescent Medicine, New Orleans, LA. March 2017.
- 20) **Zullo AR**, Dore DD, Daiello L, Baier RR, Gutman R, Gifford DR, Smith RJ. National Trends in Treatment Initiation for Nursing Home Residents with Diabetes Mellitus, 2008-2010, Lifespan Research Celebration Day, Providence, RI. October 2016.
- 21) **Zullo AR**, Dore DD, Gutman R, Mor V, Smith RJ. Food and Drug Administration Warnings and Diabetes Medication Prescribing Patterns for Older Nursing Home Residents, Lifespan Research Celebration Day, Providence, RI. October 2016.
- 22) **Zullo AR**, Lee Y, Daiello L, Mor V, Boscardin WJ, Steinman M. Effect of Beta Blocker Use on Daily Functioning, Rehospitalization, and Death after Myocardial Infarction Among Older Nursing Home Residents, Lifespan Research Celebration Day, Providence, RI. October 2016.
- 23) Hersey ML, **Zullo AR**, Lee Y, Sharmin S, Bosco E, Mor V, Steinman MA. Type of Beta-Blocker Use by Diabetes Status in Nursing Home Residents after Myocardial Infarction. Lifespan Research Celebration Day, Providence, RI. October 2016.
- 24) Berry SD, Lee Y, **Zullo AR**, Mor V, Banerjee G, McConeghy K, D'Agostino RA, Hiris J, Kiel DP. Fracture Risk Assessment In Long-term care: FRAIL. American Society for Bone and Mineral Research Annual Meeting, Atlanta, GA. September 2016.
- 25) **Zullo AR**, Dore DD, Gutman R, Mor V, Smith RJ. Selection of Sulfonylureas over Metformin in Elderly Nursing Home Residents with Diabetes Mellitus. International Conference on Pharmacoepidemiology and Therapeutic Risk Management, Dublin, Ireland. August 2016.
- 26) Ganley KY, **Zullo AR**, Sosa-Rubi SG, Conde-Glez CJ, Lurie MN, Marshall BDL, Operario D, Mayer KH, Galarraga O. Incidence and Time-Varying Predictors of HIV and Sexually Transmitted Infections (STIs) Among Male Sex Workers in Mexico City. International AIDS Conference (AIDS 2016), Durban, South Africa. July 2016.

- 27) **Zullo AR**, Dore DD, Daiello L, Baier RR, Gutman R, Gifford DR, Smith RJ. National Trends in Treatment Initiation for Nursing Home Residents with Diabetes Mellitus, 2008-2010. AcademyHealth Annual Research Meeting, Boston, MA. June 2016.
- 28) **Zullo AR**, Dore DD, Daiello L, Baier RR, Gutman R, Gifford DR, Smith RJ. Patterns of Treatment Initiation for Nursing Home Residents with Diabetes Mellitus, 2008-2010. American Diabetes Association Scientific Sessions, New Orleans, LA. June 2016. (Selected for moderated poster discussion *Epidemiology of Diabetes – What’s New?*).
- 29) McAuliffe L, **Zullo AR**, Petrillo S, Dapaah-Afriyie R, Berard-Collins C. Development of a transitions of care pharmacist tool to predict 30-day rehospitalization. American Society of Health-system Pharmacy Summer Meeting, Baltimore, MD. June 2016
- 30) Ganley KY, **Zullo AR**, Sosa-Rubi SG, Conde-Glez CJ, Lurie MN, Marshall BDL, Operario D, Mayer KH, Galarraga O. Incidence and Time-Varying Predictors of HIV and Sexually Transmitted Infections (STIs) Among Male Sex Workers in Mexico City. HIV and Hepatitis in the Americas, Mexico City, Mexico. April 2016. (Selected for *Brown University International Affairs Undergraduate Student Fund Award*).
- 31) Mahmoud LN, **Zullo AR**, Potter NS, Fehnel CR, Thompson BB, Wendell LC. Effect of an Analgesia and Sedation Protocol in Neurocritical Care Patients. American Academy of Neurology Annual Meeting, Vancouver, BC, Canada. April 2016.
- 32) Bunnell K, **Zullo AR**, Adams C, Berard-Collins C. Methicillin-Resistant Staphylococcus Aureus Pneumonia in Critically Ill Trauma Patients. Society of Critical Care Medicine Annual Congress, Orlando, FL. February 2016.
- 33) Yankulina O, **Zullo AR**, Huynh JP, Berard-Collins CM. Retrospective Analysis of the Association Between Pertuzumab and Diarrhea in HER2-Positive Breast Cancer Patients. University Health System Consortium Conference, Orlando, FL. December 2015.
- 34) Hunt L, **Zullo AR**, Berard-Collins CM, Petrillo S, Dapaah-Afriyie R. Identification of Pharmacy Transitions of Care Patients at Highest Risk of 30-day Hospital Readmission. University Health System Consortium Conference, Orlando, FL. December 2015.
- 35) Berry SD, **Zullo AR**, Lee Y, Mor V, D’Agostino R, Dosa D, Hiris J, Banerjee G, Kiel DP. A Useful Clinical Model to Predict Hip Fracture in U.S. Nursing Home (NH) Residents: the first step in developing a screening tool in the nursing home. American Society for Bone and Mineral Research Annual Meeting, Seattle, WA. October 2015.
- 36) Mahmoud L, **Zullo AR**, McKaig D, Berard-Collins CM. Concordance between aPTT and anti-Xa monitoring methods for Unfractionated Heparin in a hospitalized population: an exploratory cohort study. 23rd Lifespan Research Symposium, Providence, RI. September 2015.

- 37) Lou U, **Zullo AR**, Cabral SE, Collins C. Adherence to pegfilgrastim primary prophylaxis guidelines in current practice. Eastern States Conference for Pharmacy Residents and Preceptors, Hershey, PA. May 2015. (Selected for *Best Research Poster Award*).
- 38) Ganley K, **Zullo AR**, Li E, Sosa-Rubí SG, Galárraga O. Socioeconomic Status and Return to Clinic Among Male Sex Workers in Mexico City. Brown University Public Health Research Day, Providence, RI. April 2015.
- 39) Caine K, **Zullo AR**, Li E, Sosa-Rubí SG, Galárraga O. The Effect of Economic Interventions on HIV Treatments and Prevention: A Systematic Review. Brown University Public Health Research Day, Providence, RI. April 2015. (Selected as runner-up for *Best Undergraduate Research Poster Award*).
- 40) Lou U, **Zullo AR**, Cabral SE, Elsaid K, Collins C. Adherence to pegfilgrastim primary prophylaxis guidelines in current practice. Brown University Public Health Research Day, Providence, RI. April 2015.
- 41) Fudin H, **Zullo AR**, Migliozi DR, Elsaid K, Collins C, Dapaah-Afriyie RB. Engaging renal transplant patients in home electronic blood pressure monitoring: an exploratory qualitative study. Brown University Public Health Research Day, Providence, RI. April 2015.
- 42) Weeden N, **Zullo AR**, Li Q, Sosa-Rubí SG, Galárraga O. Socioeconomic status and CD4 count among male sex workers at high risk of contracting HIV. Brown University Public Health Research Day, Providence, RI. April 2015.
- 43) **Zullo AR**, Howe C. Estimating the effect of health insurance on personal prescription drug importation in various subpopulations using complex survey data and marginal structural models. Society for Epidemiologic Research Annual Meeting, Denver, CO. June 2015.
- 44) Berry SD, **Zullo AR**, Lee Y, Kiel D, Dosa D, Mor V. Incidence of hip fracture in U.S. nursing homes. American Geriatrics Society (AGS) Annual Meeting, National Harbor, MD. May 2015.
- 45) **Zullo AR**, Howe C. Estimating the effect of health insurance on personal prescription drug importation in various subpopulations using complex survey data and marginal structural models. Brown University Public Health Research Day, Providence, RI. April 2015.
- 46) Postman C, Li E, **Zullo AR**, Sosa-Rubí SG, Galárraga O. Socioeconomic status and access to health care among men-who-have-sex-with-men at high risk of HIV acquisition. Brown University Public Health Research Day, Providence, RI. April 2015.
- 47) Lou U, **Zullo AR**, Elsaid K, Cabral SE, Collins C. Adherence to pegfilgrastim primary prophylaxis guidelines in current practice: a multi-center cohort study. University Health System Consortium Conference, Anaheim, CA. December 2014.

- 48) Fudin H, Migliozi D, **Zullo AR**, Elsaid K, Collins C, Dapaah-Afriyie RB. Engaging renal transplant patients in home electronic blood pressure monitoring: an exploratory qualitative study. University Health System Consortium Conference, Anaheim, CA. December 2014.
- 49) Migliozi D, **Zullo AR**, Elsaid K, Collins C. Evaluation of Integrated Clinical Pharmacy Services and Home Electronic Blood Pressure Monitoring in Renal Transplantation: Preliminary Results of a Single-Center Cohort Study. 22nd Lifespan Research Symposium, Providence RI. October 2014.
- 50) Migliozi D, **Zullo AR**, Elsaid K, Collins C. The Effect of Integrated Clinical Pharmacy Services and Home Electronic Blood Pressure Monitoring on Blood Pressure Among Renal Transplant Recipients. 22nd Lifespan Research Symposium, Providence, RI. October 2014.
- 51) **Zullo AR**, Dore DD, Galarraga O. Development and Validation of a Prescription Drug Importation Index. 22nd Lifespan Research Symposium, Providence, RI. October 2014.
- 52) Rocafort PT, **Zullo AR**, Haines ST, Lebovitz L. Characteristics of Performance Assessment and Feedback: Variation in Faculty Perception by Duration of Academic Employment. American Association of Colleges of Pharmacy, Grapevine, TX. July 2014.
- 53) **Zullo AR**, Dore D, Rocafort PT, Galarraga O, Mor V. Predictors of Prescription Drug Importation and Development of an Importation Risk Score. Brown University Public Health Research Day, Providence, RI. April 2014.
- 54) **Zullo AR**, Krishnaswamy N, Dore D. A Systematic Review of the Adverse Effects of Atypical Antipsychotics in the Elderly Population. 29th International Conference on Pharmacoepidemiology and Therapeutic Risk Management, Montreal, Canada. August 2013.
- 55) **Zullo AR**, Krishnaswamy N, Dore D. A Systematic Review of the Adverse Effects of Atypical Antipsychotics in the Elderly Population. Brown University Public Health Research Day, Providence, RI. April 2013.
- 56) **Zullo AR**, Amin P. Political advocacy training in Doctor of Pharmacy curricula: a quantitative assessment and analysis of educational need. American Society of Health-System Pharmacists Annual Meeting, New Orleans, LA. December 2011.
- 57) **Zullo AR**, Amin P, Cintron N. Assessment of the impact of the historical Rutgers University Big Brother Big Sister Pharmacy Mentoring Program on student pharmacy professionals. American Society of Health-System Pharmacists Annual Meeting, Anaheim, CA. December 2010.

F. ACCEPTED & SUBMITTED ABSTRACTS

- 58) Scotina A, Gutman R, **Zullo AR**. Using Generalized Propensity Score Matching to Evaluate the Cardiovascular Safety of Multiple Type 2 Diabetes Treatments. International Society for Pharmacoepidemiology Mid-Year Meeting, Toronto, Canada. April 23, 2018.
- 59) Sharmin S, **Zullo AR**, Daiello LA, Zhang T, Shireman TI. Drug- and Dose-Specific Effects of Sulfonylureas on Cognition and Physical Functioning in Older Nursing Home Residents. International Society for Pharmacoepidemiology Mid-Year Meeting, Toronto, Canada. April 23, 2018.
- 60) **Zullo AR**, Steinman MA. Relative and Absolute Effects of Statins for Secondary Prevention on Functioning, Rehospitalization, and Mortality in Frail Older Adults. International Society for Pharmacoepidemiology Mid-Year Meeting, Toronto, Canada. April 23, 2018. Abstract no. 41.

G. GUEST LECTURES

- 1) **Zullo AR**. "Survey Methodology: Weighting, Accounting for Sampling and Clustering". Brown University PHP 2260 (Applied Epidemiologic Analysis Using SAS). March 10, 2016.
- 2) **Zullo AR**. "Pharmacovigilance: Spontaneous Reporting and Detecting Signals". Brown University PHP 2440 (Introduction to Pharmacoepidemiology). Feb 18, 2016.
- 3) **Zullo AR**. "Hospitals". Brown University PHP 0310 (Health Care in the United States). Mar 12, 2014.

H. INVITED REFEREED ACADEMIC PRESENTATIONS

- 1) **Zullo AR**, Steinman MA. Effect of Statins for Secondary Prevention on Functioning, Rehospitalization, and Mortality in Frail Older Adults. American Geriatrics Society Annual Meeting, Orlando, FL. May 4, 2017.
- 2) **Zullo AR**, Olean M, Berry SD, Lee Y, Steinman MA. Adverse Effects of Beta-Blockers in Older Nursing Home Residents after Myocardial Infarction. Asian Conference on Pharmacoepidemiology, Brisbane, Australia. October 30, 2017.
- 3) **Zullo AR**, Dahabreh IJ, Nelson J, Kent DM, Crown WH, Shah ND, Inker LA. "Comparative Effectiveness of Angiotensin Converting Enzyme Inhibitors and Angiotensin Receptor Blockers among Chronic Kidney Disease Patients". International Conference on Pharmacoepidemiology and Therapeutic Risk Management, Montreal, Canada. August 2017.
- 4) Dahabreh IJ, Nelson J, **Zullo AR**, Crown WH, Shah ND, Inker LA. "Emulating a Multi-Arm Randomized Controlled Trial of Antihypertensive Treatments for Chronic Kidney Disease Using Observational Data: How Do the Results Compare with Network Meta-Analysis?"

International Conference on Pharmacoepidemiology and Therapeutic Risk Management, Montreal, Canada. August 2017.

- 5) **Zullo AR**, Sharmin S, Daiello LA, Zhang T, Shireman TI. "Dose- and Drug-Specific Effects of Sulfonylureas on Hypoglycemia and Cardiovascular Events in Older Nursing Home Residents". International Conference on Pharmacoepidemiology and Therapeutic Risk Management, Montreal, Canada. August 2017.
- 6) **Zullo AR**, Hersey M, Sharmin S, Bosco E, Daiello LA, Lee Y, Boscardin WJ, Dore DD, Lee SJ, Steinman MA. "Type of Beta-Blocker Use by Diabetes Status and Associated Outcomes in Older Nursing Home Residents after Acute Myocardial Infarction". International Conference on Pharmacoepidemiology and Therapeutic Risk Management, Montreal, Canada. August 2017.
- 7) **Zullo AR**, Moga DC, Gnjidic D, Wei J, Lapane K. "Methodological Challenges and Opportunities of Conducting Pharmacoepidemiologic Research in Medically Complex Populations: The Case of Nursing Homes". International Conference on Pharmacoepidemiology and Therapeutic Risk Management, Montreal, Canada. August 2017.
- 8) **Zullo AR**, Smith RJ, Gutman R, Mor V, Dore DD. "Comparative Safety of Dipeptidyl Peptidase-4 Inhibitors and Sulfonylureas in Older Nursing Home Residents". American Geriatrics Society Annual Meeting, San Antonio, TX. May 2017.
- 9) **Zullo AR**, Smith RJ, Gutman R, Mor V, Dore DD. "The Effect of Dipeptidyl Peptidase-4 Inhibitors versus Sulfonylureas on Cognition and Physical Functioning in Frail Older Nursing Home Residents". International Society of Pharmacoepidemiology Mid-Year Meeting, London, UK. April 2017.
- 10) **Zullo AR**. "Using Rapid-cycle Research to Inform Pharmacy Decision-making". Parkland Hospital/Texas Tech University Health Sciences Center School of Pharmacy. Pharmacy Grand Rounds, Dallas, TX. October 2016.
- 11) **Zullo AR**, Lee Y, Daiello L, Mor V, Boscardin WJ, Steinman MA. "Effect of Beta Blocker Use on Daily Functioning, Rehospitalization, and Death after Myocardial Infarction Among Older Nursing Home Residents". AcademyHealth Annual Meeting, Boston, MA. June 2016.
- 12) **Zullo AR**, Lee Y, Daiello L, Mor V, Boscardin WJ, Steinman MA. "Effect of Beta Blocker Use on Daily Functioning, Rehospitalization, and Death after Myocardial Infarction Among Older Nursing Home Residents". American Geriatrics Society Annual Meeting, Long Beach, CA. May 2016.
- 13) **Zullo AR**, Lee Y, Mor V, Daiello L, Komaiko K, Boscardin WJ, Steinman MA. "Beta Blocker Use among United States Nursing Home Residents after Myocardial Infarction: A National Study". American Geriatrics Society Annual Meeting, National Harbor, MD. May 2015.

I. INVITED NON-REFEREED & NON-ACADEMIC PRESENTATIONS

- 14) **Zullo AR.** Variation in Propensity Score-Adjusted Estimates of Treatment Effects: Sulfonylureas versus Dipeptidyl Peptidase-4 Inhibitors for Diabetes as a Case Study, Brown University K Award Seminar hosted by the Women's Reproductive Health Research Career Development Program, Providence, RI. October 2016.
- 15) **Zullo AR.** Estimating Predicted Probabilities from Logistic Regression: Different Methods Correspond to Different Target Populations, K12 Journal Club, Providence, RI. September 2016.
- 16) **Zullo AR.** Selection of Sulfonylureas over Metformin in Older Nursing Home Residents. Brown University Pharmacoepidemiology Core, Providence, RI. August 2016.
- 17) **Zullo AR.** Estimating and Modeling Cost Data Using Generalized Gamma Regression: A Primer. Brown University K12 Journal Club, Providence, RI. June 2016.
- 18) **Zullo AR.** Effect of Beta Blocker Use on Daily Functioning, Rehospitalization, and Death after Myocardial Infarction among Older Nursing Home Residents. Brown University Pharmacoepidemiology Core, Providence, RI. May 2016.
- 19) **Zullo AR, Daiello L.** Effect of Beta Blocker Use on Daily Functioning, Rehospitalization, and Death after Myocardial Infarction Among Older Nursing Home Residents. Brown University Pharmacoepidemiology Core, Providence, RI. February 2016.
- 20) **Zullo AR.** National Trends in Treatment Initiation for Nursing Home Residents with Type 2 Diabetes Mellitus, 2008-2010. Brown University Pharmacoepidemiology Core, Providence, RI. November 2015.
- 21) **Zullo AR.** National Trends in Initiation of Diabetes Medications in the Nursing Home and Current Best Practices for Prescribing. Brown University Division of Geriatrics and Palliative Medicine, Providence, RI. November 2015.
- 22) **Zullo AR.** National Trends in Initiation of Diabetes Medications in the Nursing Home and Current Best Practices for Prescribing. Rhode Island Hospital Department of Pharmacy, Providence, RI. November 2015.
- 23) **Zullo AR.** What's the Risk? A Simple Approach for Estimating Adjusted Risk Measures from Nonlinear Models Including Logistic Regression (Journal Club and Application to Personal Prescription Drug Importation). Brown University Center for Evidence-based Medicine, Providence, RI. September 2015.

- 24) **Zullo AR**. Beta Blockers Use among United States Nursing Home Residents after Myocardial Infarction: A National Study. Rhode Island Hospital Department of Pharmacy, Providence, RI. May 2015.
- 25) **Zullo AR**. Pharmaceutical Contamination of Drinking Water: Methodological Challenges to Human Health Risk Assessment. Brown University School of Public Health, Providence, RI. December 2013.
- 26) **Zullo AR**, Keohane L. Comparative Effectiveness Research and Patients with Multiple Chronic Conditions. Brown University School of Public Health Journal Club, Providence, RI. November 2013.
- 27) Keohane L, **Zullo AR**. Mortality and Access to Care among Adults after State Medicaid Expansions. Brown University School of Public Health Journal Club, Providence, RI. September 2012.
- 28) **Zullo AR**. Ingenol Mebutate for Treatment of Actinic Keratosis. Horizon Blue Cross/Blue Shield of New Jersey, Newark, NJ. April 2012.
- 29) **Zullo AR**. Pharmacogenomics of Warfarin in the Egyptian Patient Population. Princeton University Medical Center, Princeton, NJ. February 2012.
- 30) **Zullo AR**, Wang S, Haddad S. Influenza and Pneumococcal Vaccinations for Primary Prevention. Princeton University Medical Center, Princeton, NJ. February 2012.
- 31) **Zullo AR**. Methicillin Susceptible *Staphylococcus aureus* Bacteremia and Endocarditis in IV Drug Users. Princeton University Medical Center, Princeton, NJ. February 2012.
- 32) **Zullo AR**. Apixaban versus Enoxaparin for Thromboprophylaxis in Medically Ill Patients. Princeton University Medical Center, Princeton, NJ. February 2012.
- 33) **Zullo AR**. Apnea of Prematurity: Comparative Effectiveness of Caffeine Citrate and Aminophylline. Jersey Shore University Medical Center, Neptune, NJ. December 2011.
- 34) **Zullo AR**. Treatment of Community Acquired Pneumonia in Pediatric Patients. Jersey Shore University Medical Center, Neptune, NJ. December 2011.
- 35) **Zullo AR**. Remifentanyl and Propofol for Weaning of Mechanically Ventilated Pediatric Intensive Care Unit Patients. Jersey Shore University Medical Center, Neptune, NJ. November 2011.
- 36) **Zullo AR**, Vo J. Sexually Transmitted Diseases: Key Guideline Updates Affecting Navajo Nation. Indian Health Services—Kayenta Health Center, Kayenta, AZ. November 2011.

- 37) **Zullo AR**, Chen J. Medical and Pharmaceutical Management of Angiotensin Converting Enzyme Inhibitor-Induced Angioedema. Robert Wood Johnson University Hospital, Hamilton, NJ. October 2011.
- 38) **Zullo AR**, Chen J. Falls Prevention Strategies in Elderly Patients. Robert Wood Johnson University Hospital. Hamilton, NJ. October 2011.
- 39) **Zullo AR**, Chen J. Proper Medication Disposal Practices and Environmental Implications. Robert Wood Johnson University Hospital, Hamilton, NJ. September 2011.
- 40) **Zullo AR**. Predictors of New-Onset Diabetes in Patients Treated with Atorvastatin. CVS Caremark Headquarters Clinical Operations Team, Woonsocket, RI. June 2011.
- 41) **Zullo AR**. Leukotriene Antagonists as First-Line or Add-On Asthma-Controller Therapy. CVS Caremark Headquarters Clinical Operations Team, Woonsocket, RI. June 2011.
- 42) **Zullo AR**. Olmesartan for the Delay or Prevention of Microalbuminuria in Type 2 Diabetes. CVS Caremark Headquarters Clinical Operations Team. Woonsocket, RI. May 2011.

J. PROFESSIONAL PUBLICATIONS

- 1) **Zullo AR**. OTC Spotlight: Niacin for Dyslipidemia. *CVS Clinical FOCVS Newsletter*. 2011; 13(8): 5-6.
- 2) **Zullo AR**. Attention Deficit Hyperactivity Disorder (ADHD) Treatment Review. *CVS Clinical FOCVS Newsletter*. 2011;13(8):1-4.
- 3) **Zullo AR**. Sun Protection: Basic Principles of Sunscreens. *CVS Clinical FOCVS Newsletter*. 2011;13(7):2-4.
- 4) **Zullo AR**. Aquatic Envenomations: Avoid the Sting. *Shore Memorial Hospital Pharmacy Newsletter*. 2010;6(1):1-2
- 5) **Zullo AR**. Spider Bites: Brown v. Black. *Shore Memorial Hospital Pharmacy Newsletter*. 2010;6(1):2-4.
- 6) **Zullo AR**. OTC Spotlight: Niacin for Dyslipidemia. *CVS Clinical FOCVS Newsletter*. 2011; 13(8): 5-6.
- 7) **Zullo AR**. Leading Littles at Lambda: Rutgers. *The Laurel*. 2010;6(4):1
- 8) **Zullo AR**. Behind-The-Counter Medications: A Healthcare Solution. *The Roosevelt Institution Public Policy Journal*. 2008:3-5

K. AUTHORED LETTERS TO LAY MEDIA

1) None

7. RESEARCH GRANTS

A. GRANTS CURRENTLY HELD

Beta blockers and their impact on fracture risk in nursing home residents taking atypical antipsychotics

Role on Project: Co-Investigator (PI: C. Duarte)

Project Period: September 1st, 2017 – August 31st, 2022

Funder: National Institutes of Health (National Institute on General Medical Sciences)

Total Amount: \$2,159,876

Project Identifier: P20-GM121031

Description: As part of a cohesive series of projects, the overall aim of this project is to assess whether beta blockers ameliorate the risk of fractures associated with atypical antipsychotics in a population of older nursing home residents.

The Burden of Infections in Long-Term Care Facilities: Identification, Treatment, and Health Outcomes

Role on Project: Co-Investigator (PI: V. Mor)

Project Period: September 1st, 2017 – September 1st, 2019

Funder: Sanofi Pasteur

Total Amount: \$1,439,086

Project Identifier: 005705

Description: The overall aim of this project is to describe the epidemiology of various infections in long-term care using recent data, thereby providing insights into a number of high-priority areas where medication utilization can be improved.

Patient Centered Outcomes Research Institutional Mentored Career Development Program

Role on Project: Scholar (PI: T. Trikalinos)

Funder: National Institutes of Health (Agency for Healthcare Research and Quality)

Project Period: September 1st, 2015 – September 1st, 2018

Project Identifier: K12-HS022998

Description: The objective of this program is to prepare scholars to apply comparative effectiveness research methods to patient-centered outcomes research.

High Dose Influenza Vaccine Morbidity and Mortality in U.S. Nursing Homes: Assessing Cost-Effectiveness and Relative Benefit Compared to Standard Dose

Role on Project: Co-Investigator (PI: T. Shireman)

Project Period: December 31st, 2016 – April 30th, 2018

Funder: Insight Therapeutics

Total Amount: \$420,000

Project Identifier: N/A

Description: The aim of this project is to estimate the effectiveness of high dose influenza vaccine in long-term care facilities using linked trial and administrative data.

A Clinical Prediction Tool to Guide Treatment of Osteoporosis in the Nursing Home

Role on Project: Co-Investigator, then Site Principal Investigator (PI: S. Berry)

Project Period: Aug 1st, 2014 – Apr 30st, 2018

Funder: National Institutes of Health (National Institute on Aging)

Total Amount: \$1,691,799

Project Identifier: R01-AG045441

Description: The objective of this project is to develop a screening tool for osteoporosis and use the screening tool to determine a threshold at which osteoporosis medications may prevent fractures.

B. COMPLETED GRANTS

Outcomes of a Pharmacist-Managed Hepatitis C Virus Clinic Care Delivery Model

Role on Project: Senior Investigator

Project Period: Jan 1st, 2017 – Dec 31st, 2017

Funder: American Society of Health-System Pharmacists Research and Education Foundation

Total Amount: \$4,903

Project Identifier: N/A

Description: The objectives of this project are: 1) to describe the demographic, clinical, and social characteristics of adult patients infected with HCV at a pharmacist-managed outpatient HCV clinic, 2) to characterize the determinants of enrollment in a pharmacist-managed outpatient HCV clinic versus a limited-pharmacist- involvement clinic for HCV patients, and 3) to estimate the effect of a pharmacist-managed HCV clinic versus a limited-pharmacist- involvement clinic on treatment completion and achieving HCV cure.

Conducting Systematic Reviews to Inform World Health Organization Guidelines on the Clinical Management of Cancer Pain

Role on Project: Co-Investigator (PI: E. Balk)

Project Period: January 1st, 2017 – October 30th, 2017

Funder: World Health Organization

Total Amount: \$120,763

Description: This goal of this project is to conduct a systematic review to inform the development of new cancer pain treatment guidelines.

Identification of Pharmacy Transitions of Care Patients at Highest Risk of 30-Day Hospital Readmission

Role on Project: Co-Investigator (PI: L. McAuliffe)

Project Period: Jan 1st, 2016 – Dec 31st, 2016

Funder: American Society of Health-System Pharmacists Research and Education Foundation

Total Amount: \$5,000

Project Identifier: N/A

Description: The objectives of this project were: 1) to identify factors associated with an increased risk of unplanned hospital readmission, paying particular attention to factors that a) frequently available to the transitions of care pharmacist, and b) unavailable in previous models of rehospitalization developed by other researchers using administrative claims data, and 2) develop and validate a practical prediction tool for use by transitions of care pharmacists.

Outcomes of Beta Blockers after Myocardial Infarction in Nursing Home Residents

Role on Project: Research Assistant, then Co-Investigator (PIs: M. Steinman)

Project Period: Aug 1st, 2013 – Jun 30, 2016

Funder: National Institutes of Health (National Heart, Lung, and Blood Institute)

Total Amount: \$1,678,874

Project Identifier: R01-HL111032

Description: The objective of this project was to better understand the benefits and harms of beta blockers in frail nursing home residents after myocardial infarction to substantially improve the evidence base and help guide treatment decisions for this important population.

Doubly Robust Estimation of the Effect of Health Insurance on Personal Prescription Drug Importation

Role on Project: Principal Investigator

Project Period: May 1st, 2015 – Aug 31st, 2015

Funder: Brown University (Population and Studies Training Center)

Total Amount: \$2,165

Description: The objective of this project was to extend and apply doubly robust estimation of causal effects for complex survey data to estimate the effect of health insurance on personal prescription drug importation behavior.

Estimating the Effect of Health Insurance on Personal Prescription Drug Importation Using Marginal Structural Models and Complex Survey Data

Role on Project: Principal Investigator

Project Period: Jan 1st, 2015 – Jan 1st, 2016

Funder: Brown University (Nora Kahn Piore Award)

Total Amount: \$3,000

Description: The objective of this project was to use state-of-the-art quantitative methods for causal inference, specifically inverse probability weighted (IPW) marginal structural models (MSMs), in complex survey data to estimate the unconditional effect of health insurance on the risk of personal prescription drug importation across subpopulations of the United States defined by important characteristics.

The Effects of Socioeconomic Status on Access to Care, Medication Adherence, and HIV Viral Suppression: Establishing a Framework for Conditional Economic Incentivization of Healthy Behaviors

Role on Project: Principal Investigator

Project Period: Sep 1st, 2014 – May 30, 2015

Funder: Brown University (Sheridan Center for Teaching and Learning)

Total Amount: \$2,000

Description: The objective of this project was to preliminarily test the feasibility and acceptability of a highly innovative conditional economic incentives program to incentivize healthy behaviors among HIV-positive men in Mexico City.

Estimating the Effect of Health Insurance on Personal Prescription Drug Importation in Underserved Populations

Role on Project: Principal Investigator

Project Period: May 1st, 2014 – Aug 31st, 2014

Funder: Brown University (Population Studies and Training Center)

Total Amount: \$790

Description: The objective of this project was to extend novel causal inference methods for complex survey data to estimate the effect of policy interventions on personal prescription drug importation behavior.

C. PROPOSALS SUBMITTED

Opioid Use in Post-Acute Hip Fracture Care: Prescribing Patterns, Effectiveness, and Safety

Role on Project: Principal Investigator

Funder: National Institutes of Health (National Institute on Aging)

Project Period: Sep 1st, 2018 – Aug 31st, 2020

Total Requested: \$461,572

Description: This project will assess benefits and harms of analgesic drugs for pain treatment (opioids and non-steroidal anti-inflammatory drugs) to substantially improve the evidence base and help guide treatment decisions for this important population residing in skilled nursing facilities (SNFs).

Safe Cardiometabolic Drug Prescribing to Prevent Injury in the Nursing Home

Role on Project: Site Principal Investigator

Funder: National Institutes of Health (National Institute on Aging)

Project Period: Feb 1st, 2018 – Jan 31st, 2022

Total Requested: \$1,437,473

Description: This project will identify cardiometabolic drugs with a poor net clinical benefit, defined as drugs that increase the risk of injurious falls and fail to achieve clinical benefit, to improve prescribing in the nursing home setting.

Fracture Risks in Renal Transplant Recipients: Post-Hoc Analyses of the FAVORIT Trial

Role on Project: Co-Investigator

Funder: National Institutes of Health (National Institute of Diabetes and Digestive and Kidney Diseases)

Project Period: Sep 1st, 2018 – Aug 31st, 2020

Description: This project will identify the critical risk factors for fractures among renal transplant recipients, thus informing future interventions to continue substantial gains in fracture reduction among transplant recipients.

Behavioral Control and Alzheimer’s Disease: Policies, Medication Use, and Health Effects Across Care Settings

Role on Project: Co-Investigator

Funder: National Institutes of Health (National Institute on Aging)

Project Period: April 1st, 2018 – Jan 31st, 2022

Total Requested: \$12,128,139

Description: This project will build on data resources assembled under a previous project to address key questions pertaining to clinical, health policy, and financial issues that involve long term care for a growing number of older Americans.

8. SERVICE

A. EXTRAMURAL

- Abstract and Proposal Reviewer, American Geriatrics Society Annual Meeting 2015 – 2018
- Abstract Reviewer, International Society of Pharmacoepidemiology Annual Meeting 2016
- Abstract Reviewer, International Society of Pharmacoepidemiology Midyear Meeting 2016– 2018
- Proposal Reviewer, American Society of Consultant Pharmacists 2016
- Abstract Reviewer and Poster Judge, Vizient University Health System Consortium 2016
- Abstract and Proposal Reviewer, International Association of Gerontology and Geriatrics World Congress 2016
- Coordinator, Lifespan Pharmacy Board Certification Review Group 2015
- Abstract Reviewer, Society for Epidemiologic Research Meeting 2014

B. UNIVERSITY AND DEPARTMENTAL

- Member, Pharmacoepidemiology Research Core 2016 – 2017
Department of Health Services, Policy, and Practice, Brown University
- Ad hoc Interviewer, Tenure Track Faculty Candidates 2015
Department of Health Services, Policy, and Practice, Brown University
- Ad hoc Interviewer, Research Track Faculty Candidates 2014 - 2015
Department of Health Services, Policy, and Practice, Brown University
- Representative, Graduate Program Steering Committee 2013 - 2014
School of Public Health, Brown University
- Coordinator, Journal Club 2013 - 2014
School of Public Health, Brown University
- Ad hoc Interviewer, PhD Applicants 2013
Department of Epidemiology, Brown University

C. EDITORIAL

- None

D. JOURNAL REVIEW

- Aging Clinical and Experimental Research
- Annals of Internal Medicine
- Annals of Pharmacotherapy
- BMC Health Services Research
- International Journal of Health Care Finance and Economics
- Journal of the American Pharmacists Association
- Journal of General Internal Medicine
- Journal of Pharmacy Technology
- Methods of Information in Medicine
- Pharmacoepidemiology and Drug Safety
- PLOS One
- Research in Social and Administrative Pharmacy
- The American Journal of Pharmacy Benefits
- The BMJ

E. GRANT REVIEW

- None

F. SERVICE TO THE COMMUNITY

None relevant.

9. AWARDS

International Society of Pharmacoepidemiology Midyear Conference Travel Award 2017

- Awarded \$1,000

International Society of Pharmacoeconomics and Outcomes Research Meeting Annual Meeting Research Presentation Award Finalist 2017

- Poster ranked in the top 10% based on reviewer scores

American Geriatrics Society National Conference Travel Award 2017

- \$250 award for being a top 25 abstract scored by the AGS Abstract Selection Committee

American Society of Health-Systems Pharmacy Best Practices Award 2017

- MEDCOINS transitions of care project selected as one of the five best practices from the entire U.S.

Pharmacoepidemiology and Drug Safety "Top Peer Reviewer" 2016

International Society of Pharmacoepidemiology Midyear Conference Travel Award	2016
<ul style="list-style-type: none"> • Awarded \$1,000 	
American College of Cardiology/American Geriatrics Society/National Institute of Aging Pharmacotherapy in Older Adults with Cardiovascular Disease Early Career Travel Award	2016
American Geriatrics Society Scientist-in-Training Research Award	2016
<ul style="list-style-type: none"> • One \$500 award presented to a pre-doctoral candidate who submitted the highest-scoring abstract for the 2016 AGS Annual Meeting and demonstrates evidence of an early but promising career path in geriatrics research 	
American Geriatrics Society National Conference Travel Award	2016
<ul style="list-style-type: none"> • \$250 award for being a top 25 abstract scored by the AGS Abstract Selection Committee 	
American Geriatrics Society National Conference Travel Award	2015
<ul style="list-style-type: none"> • \$250 award for being a top 25 abstract scored by the AGS Abstract Selection Committee 	
Rhode Island Hospital Department of Pharmacy Preceptor-in-Training of the Year Award	2016
<ul style="list-style-type: none"> • “The recipient of this award has demonstrated strong commitment to the professional training of students and residents while also displaying leadership skills and professionalism.” 	
Finalist for Outstanding Academic Accomplishment by a Brown University Master’s Student Award	2015
Phi Lambda Sigma/American Foundation for Pharmaceutical Education/GlaxoSmithKline First Year Graduate Scholarship (declined)	2012
<ul style="list-style-type: none"> • One \$7,500 award granted annually to fund graduate study in a college of pharmacy graduate program of the award recipient’s choice 	
New Jersey Pharmacists Association Outstanding Leadership Award	2012
United States Public Health Service Excellence in Public Health Pharmacy Practice Award	2012
Ernest Mario Endowed Scholar, Rutgers University School of Pharmacy	2011 – 2012
John and Josephine Calasibetta Scholar, Rutgers University School of Pharmacy	2011 – 2012
Rutgers Alumni Association Scholar, Rutgers University School of Pharmacy	2010 – 2011
Rutgers University Academic Merit Scholar	2006 – 2010
Phi Lambda Sigma Pharmacy Leadership Honor Society	2009
Phi Delta Chi Pharmacy Fraternity Leadership Award	2007 – 2008

10. STUDENTS & TRAINEES

Current Trainees

Trainee Name	Type/Training Period	Thesis/Project Title	Funding	Role
Jason Gantenberg	PhD Epidemiology, Brown University (2017 – Present)	Effect of Alcohol Use on the Association Between Neighborhood-Level Characteristics and HIV/STIs”	AHRQ: K12 HS022998; PI. A. Zullo.	Co-Primary Supervisor
Brian Gilbert	BS Applied Mathematics, Brown University (2017 – Present)	Principal Stratification for Comparative Safety of Diabetes Medications in Nursing Home Residents	N/A	Secondary Advisor
Amanda Mogul	PGY2 Resident Ambulatory Care, Lifespan Pharmacy (2017 – Present)	Main Effect of Secondary Prevention Medication Use on Functional Outcomes, Death, and Rehospitalization in Older Nursing Home Residents after Acute Myocardial Infarction	Lifespan Pharmacy	Primary Advisor and Preceptor
Katherine Corsi	PGY2 Resident Ambulatory Care, Lifespan Pharmacy (2017 – Present)	Subgroup Effects of Secondary Prevention Medication Use on Functional Outcomes, Death, and Rehospitalization in Older Nursing Home Residents after Acute Myocardial Infarction	Lifespan Pharmacy	Primary Advisor and Preceptor
Alicia Ortega	PGY2 Resident Oncology, Lifespan Pharmacy (2017 – Present)	Discontinuation of medications after advanced cancer diagnosis in older nursing home residents	Lifespan Pharmacy	Primary Advisor and Preceptor
Arielle Childs	ScM Epidemiology, Brown University (2017 – present)	Systematic Review of the Burden of Respiratory Infections in Long-Term Care	Sanofi Pasteur; PI. V. Mor	Primary Supervisor
Sadia Sharmin	ScM Epidemiology, Brown University (2016 – present)	Dose- and Drug-Specific Effects of Sulfonylureas on Cognitive and Physical Functioning in Older Nursing Home Residents	AHRQ: K12 HS022998; PI. A. Zullo.	Primary Supervisor

Anthony Scotina	PhD Biostatistics, Brown University (2017 – present)	Estimation of Multi-Treatment Effects from Observational Data with Applications to Diabetes Mellitus	PCORI: HSRP2015334 2; PI. R. Gutman	Thesis Reader
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Completed Trainees

Trainee Name	Type/Training Period	Thesis/ Project Title	Funding	Role
Joella Adams	PhD Epidemiology, Brown University (2016 – 2017)	Effect of Adolescent Alcohol Use of the Associations Between Neighborhood-Level Characteristics and HIV/STIs	N/A	Summer Thesis Reader
Geetanjali Banerjee	PhD Epidemiology, Brown University (2014 – 2016)	Geographic and Facility Variation in Hip Fracture Among United States Long-Stay Nursing Home Residents	NIH: R01 AG045441; PI. S. Berry	Supervisor
Melissa Previte	PharmD Student, Lifespan Pharmacy and URI (2017)	Patterns of sugammadex use for the reversal of short-acting non-depolarizing neuromuscular blocking agents	Lifespan Pharmacy	Secondary Advisor
Matthew Olean	APPE Research PharmD Student, Lifespan Pharmacy (2017)	Adverse Effects of Beta-Blockers in Older Nursing Home Residents after Acute Myocardial Infarction	Lifespan Pharmacy	Primary Advisor and Preceptor
Elliott Bosco	APPE Research PharmD Student, Lifespan Pharmacy (2016)	Controlled substance diversion in health systems: failure mode and effects analysis for prevention	Lifespan Pharmacy	Primary Advisor and Preceptor
Tina Gao	MPH, Brown University (2014 – 2016)	Risk factors for not being tested for HIV among young adolescents in NYC	N/A	Thesis Reader
Katherine Caine	BA, Brown University (2014 – 2015)	The Effect of Economic Interventions on HIV Transmission in Vulnerable Populations: A Systematic Review	Brown University; PI. A. Zullo	Project Advisor
Karla Ganley	BA, Brown University (2014 – 2015)	Socioeconomic Status and Return to Clinic Among Male Sex Workers in Mexico City	Brown University; PI. A. Zullo	Project Advisor
Nicholas Weeden	BA, Brown University (2014 – 2015)	Socioeconomic status and CD4 count among MSWs at high risk of contracting HIV	Brown University; PI. A. Zullo	Project Advisor

Claire Postman	BA, Brown University (2014 – 2015)	Self-Identification: Insurance Status and Sex Work in Mexico City	Brown University; PI. A. Zullo	Project Advisor
Robert Brunault	PGY2 Resident Oncology, Lifespan Pharmacy (2016 – 2017)	Managing diabetes mellitus in nursing home residents with advanced cancer: a national study	Lifespan Pharmacy	Primary Advisor and Preceptor
Safiya Naidjate	PGY2 Resident Ambulatory Care, Lifespan Pharmacy (2016 – 2017)	Comparative Effectiveness of Pharmacist Hepatitis C Virus Clinic Care Delivery Models	ASHP Foundation; PI. S. Naidjate	Primary Advisor and Preceptor
Michelle Hersey	PGY2 Resident Ambulatory Care, Lifespan Pharmacy (2016 – 2017)	Outcomes of “diabetes-friendly” versus “diabetes-unfriendly” beta-blockers in older nursing home residents with diabetes after acute myocardial infarction	Lifespan Pharmacy	Primary Advisor and Preceptor
Laura McAuliffe	PGY2 Resident Ambulatory Care, Lifespan Pharmacy (2015 – 2016)	Development and validation of the MEDCOINS transitions of care pharmacist tool to predict potentially avoidable 30-day readmissions	ASHP Foundation; PI. L. McAuliffe	Primary Advisor and Preceptor
Olga Yankulina	PGY2 Resident Oncology, Lifespan Pharmacy (2015 – 2016)	Pertuzumab-associated Diarrhea in HER2/neu Positive Breast Cancer Patients: A Comparison of Trials to Actual Practice	Lifespan Pharmacy	Primary Advisor and Preceptor
Hao Deng	MPH, Brown University (2014 – 2015)	Outcomes of Beta-blockers in Older Nursing Home Residents after Acute Myocardial Infarction	NIH: R01 HL111032; PI. M. Steinman	Primary Supervisor
Hannah Fudin	PGY2 Resident Ambulatory Care, Lifespan Pharmacy (2014 – 2015)	Renal Transplant Patient Opinions of Home Electronic Blood Pressure Monitoring (HeBPM): An Exploratory Qualitative Study	Lifespan Pharmacy	Primary Advisor and Preceptor
Uvette Lou	PGY2 Resident Oncology, Lifespan Pharmacy (2014 – 2015)	Overuse and Underuse of Pegfilgrastim for Primary Prophylaxis of Febrile Neutropenia	Lifespan Pharmacy	Primary Advisor and Preceptor

11. SELECTED BROADCAST MEDIA QUOTING ANDREW ZULLO OR ZULLO ET AL. PAPERS

- 1) Bluth, Rachel. "Looking for Bargains, Many Americans Buy Medicines Abroad". *National Public Radio (NPR)*. December 17th, 2016.

12. SELECTED TEXT MEDIA QUOTING ANDREW ZULLO OR ZULLO ET AL. PAPERS

- 1) Schwenk, Thomas. Post-Myocardial Infarction Beta-Blockers and Functional Decline in Nursing Home Residents. *NEJM Journal Watch*. December 20th, 2016.
- 2) Bluth, Rachel. Faced with Unaffordable Drug Prices, Tens of Millions Buy Medicine Outside U.S. *Kaiser Health News*. December 20th, 2016.
- 3) Predit, Robert. Beta Blockers May Not Be Best Heart Drugs for Dementia Patients. *U.S. News and World Report*. December 12th, 2016.

13. LICENSES & CERTIFICATIONS

- Registered Pharmacist (RPH05164) 2012 - Present
Rhode Island Department of Health
- Registered Pharmacist (28RI03517000) 2012 - Present
New Jersey Department of Health
- Teaching Certificate in Research Mentorship 2015
Sheridan Center for Teaching and Learning, Brown University
- Teaching Certificate in Reflective Teaching 2014
Sheridan Center for Teaching and Learning, Brown University

14. PROFESSIONAL LEAVES

- Bereavement Jan 2015 - Mar 2015

15. RESEARCH SUMMARY

My research focuses on the use, comparative safety, and comparative effectiveness of medications in older adults, especially those who reside in long-term care facilities or nursing homes. Since there is little or no evidence to support treatment decisions for many important subgroups of older adults receiving medications in clinical practice, my work seeks to generate such evidence. To achieve this

overarching aim, I employ a diverse set of quantitative methods to large routinely collected administrative and clinical data.