### **CURRICULUM VITAE**

G. Caleb Alexander, MD, MS

### PERSONAL DATA

### Business Address

Johns Hopkins School of Public Health Center for Drug Safety and Effectiveness Department of Epidemiology 615 N. Wolfe Street W6035 Baltimore, MD 21205

Phone: 410 955 8168 Fax: 410 955 0863

Email: galexand@jhsph.edu

# Clinical Address

Johns Hopkins at Green Spring Station 10753 Falls Road Suite 325 Lutherville, MD 21093 Clinic Phone: 410 583 2926

Clinic Fax: 410 583 2883

### **EDUCATION AND TRAINING**

1988-1990	Candidate for BA, Oberlin College
1991-1993	University of Pennsylvania, BA (Philosophy)
1994-1998	Case Western Reserve University, MD
1998-1999	Intern, Internal Medicine, University of Pennsylvania
1999-2001	Resident, Internal Medicine, University of Pennsylvania
2001-2003	Robert Wood Johnson Clinical Scholar, University of Chicago
2002-2003	University of Chicago, Department of Health Studies, MS

### Medical Licensure

Drug Enforcement Agency Controlled Substance Licensure, through 9/30/18 Maryland Physician and Controlled Substance License, through 6/30/18

Medical Board Certification

American Board of Internal Medicine, through 2021

# PROFESSIONAL EXPERIENCE

2014-	Affiliate Faculty, Center for Health Services and Outcomes Research (CHSOR), Johns
	Hopkins University
2012-	Associate Professor of Epidemiology and Medicine, Johns Hopkins Bloomberg

School of Public Health

2012-	Founding Co-Director, Johns Hopkins Center for Drug Safety and Effectiveness
2011-2012	Associate Professor, Division of General Medicine, University of Chicago
2007-2012	Affiliate Faculty, Center for Interdisciplinary Health Disparities Research (CIHDR),
	University of Chicago
2005-	Adjunct Research Associate, Department of Pharmacy Practice, University of Illinois at
	Chicago School of Pharmacy
2005-2011	Assistant Professor, Division of General Medicine, University of Chicago
2003-2005	Instructor, Division of General Medicine, University of Chicago
2003-2006	Affiliate Faculty, Robert Wood Johnson Clinical Scholars Program
2003-2012	Affiliate Faculty, MacLean Center for Clinical Medical Ethics
2001-2003	Off-tour Attending Physician, Veterans Affairs Hospital, Hines, Illinois

# PROFESSIONAL ACTIVITIES

Society Membership and Leadership

1998-2001	Philadelphia County Medical Society
1998-2009	American Medical Association
1998-	Physicians for Social Responsibility
1998-	Alpha Omega Alpha Medical Honors Society
2000-	Society for General Internal Medicine
2000-	American College of Physicians
2003-2009	American Society of Bioethics and Humanities
2006-2007	Chair, Program Committee, RWJ Faculty Scholars National Meeting
2006	Member, Program Committee, RWJ Faculty Scholars National Meeting
2007-	International Society for Pharmacoeconomics and Outcomes Research (ISPOR)
2008	Selection Committee, Midcareer Research Mentorship Award, SGIM
2009-	International Society for Pharmacoepidemiology (ISPE)

# Non-Commercial Advisory Boards

2000-2003	Transplant Task Force, End Stage Renal Disease Renal Network #9/#10
2005	American Society of Bioethics and Humanities President's Advisory Committee on
	Ethics Standards
2007-2011	Cost of Cancer Care Task Force, American Society of Clinical Oncology
2008-2016	Charter Member, IMS Health Services Research Network
2010-2014	FDA, Drug Safety and Risk Management Advisory Committees, Ad Hoc Member
	<ul> <li>October 2010 Cardiovascular and Renal Committee (Darbapoeitin)</li> </ul>
	<ul> <li>October 2012 Endocrinologic and Metabolic Committee (lomitapide/mipomersen)</li> </ul>
	<ul> <li>July 2013 Arthritis Committee (Criteria for axial spondyloarthritis)</li> </ul>
	<ul> <li>November 2013 Peripheral &amp; Central Nervous System Committee (Alemtuzumab)</li> </ul>
	<ul> <li>May 2014 Public Meeting (Post Marketing Requirements for Opioid Analgesics)</li> </ul>
	• July 2015 Bone, Reproductive and Urologic Drugs Committee (Flibanserin)
	<ul> <li>December 2015 Pulmonary &amp; Allergy Drugs Committee (Cough Syrup/Codeine)</li> </ul>
	<ul> <li>October 2016 Bone, Reproductive and Urologic Drugs Committee (desmopressin)</li> </ul>
	• November 2017 Psychopharmacologic Drugs Advisory Committee (buprenorphine)
6/2014-	Chairman, FDA Peripheral and Central Nervous System Drugs Advisory Committee
	<ul> <li>November 2015 Peripheral &amp; Central Nervous System Committee (Drisapersen)</li> </ul>
	<ul> <li>April 2016 Peripheral &amp; Central Nervous System Committee (Eterplirsen)</li> </ul>
	April 2018 Peripheral & Central Nervous System Committee (Cannabidiol)
8/2015-7/2018	Center of Excellence for Comparative Effectiveness Research, University of Illinois at

Chicago

2015-2017 Legal Science, LLC, contract through National Institutes of Drug Abuse to develop

Prescription Drug Abuse Policy System

Scientific Advisory Board, Media Policy Center, Santa Monica, California 2016-

Facilitator, Prioritizing Comparative Effectiveness Research Questions for Preventing 2/2016

Opioid Misuse in the Management of Pain: A Stakeholder Workshop (PCORI)

### Commercial Advisory Boards

1/2007-	IQVIA Institute for Healthcare Informatics
1/2014-6/2016	PainNavigator, LLC, Minneapolis, Minnesota
10/2015-	Delta Faucet Company, Indianapolis, Indiana
7/2016-	MesaRx Innovations, New York, New York
1/2017-	OptumRX National P&T Committee

Testimony and Briefings

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2012	Food and Drug Administration (Drug Labeling for Prescription Opioids)
2015	United States Senate Veterans' Affairs Committee (Prescription Opioids)
2016	Centers for Disease Control and Prevention (Prescription Opioids)
2016	Committee on Health and Government Operations, Maryland House of Delegates
	(Prescription Drug Monitoring Programs)
2016	Food and Drug Administration (Prescription Opioids)
2016	National Academy of Sciences, Institute of Medicine (Regulation of Opioids)
2017	Senate Finance Committee, Maryland House of Delegates (Prescription Drug Pricing)
2017	United States House of Representatives, Congressional Oversight Committee (Opioid
	Epidemic)
2018	Briefing for U.S. Senate Staff Hosted by Senator Ben Cardin (Opioid Epidemic)

#### **EDITORIAL ACTIVITIES**

#### Peer Review Activities

Drugs

Health Affairs

Ad hoc reviewer – Journals

American Journal of Kidney Diseases Health Services Research

American Journal of Managed Care Hypertension

American Journal of Medicine International Journal of Quality Improvement

American Journal of Preventive Medicine

American Journal of Public Health Journal of American College Health

Journal of the American Pharmacists Association Annals of Internal Medicine Archives of Internal Medicine Journal of the American Society of Nephrology

BioMed Central (BMC) Gastroenterology Journal of Clinical Ethics

BioMed Central (BMC) Infectious Diseases Journal of General Internal Medicine

British Journal of Cancer Journal of Rural Health

British Medical Journal Medical Care

Canadian Medical Association Journal Medical Decision Making

Milbank Quarterly Clinical Therapeutics

New England Journal of Medicine **CNS** Drugs

Disease Management and Health Outcomes PharmacoEconomics

Pharmacoepidemiology and Drug Safety

Social Science and Medicine

#### Editorial Board Memberships

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2007-2010	Medical Decision Making, Deputy Editor
2008-2012	Journal of General Internal Medicine, Deputy Editor
2008-2010	Society of General Internal Medicine Forum, Associate Editor
2010-2011	BMC Health Services Research, Associate Editor
2012-2014	Journal of the American Pharmacists Association (JAPhA), Editorial Board
2012-2014	Journal of General Internal Medicine, Editorial Board
2012-	Medical Care, Deputy Editor
2013-	Drug Safety, Editorial Board
2014-	Drugs – Real World Outcomes, Editorial Board

#### Grants

- 1. The Netherlands Organization for Health Research and Development (ZonMw), The Ministry of Health, Welfare, and Sport, The Hague, The Netherlands (2007)
- 2. The University of Chicago Program for Pharmaceutical Policy (2007-2010)
- 3. University of Chicago/University of Illinois at Chicago CDC Center for Health Promotion Economics (2007)
- 4. The University of Chicago Diabetes Research and Training Center (2008).
- 5. Agency for Healthcare Research and Quality, Special Emphasis Panel (R18), "Optimizing Prevention and Healthcare Management for the Complex Patient." March 2008.
- 6. RFA 09-003. NIH Challenge Grants in Health and Science Research (RC21). April 2009.
- 7. National Institute of Aging Special Emphasis Panel (PO1). Medical Professionalism and Healthcare Grants. November 2009.
- 8. Agency for Healthcare Research and Quality Special Emphasis Panel (R18). Comparative Effectiveness Delivery System Demonstration Grants. July 2010.
- 9. Agency for Healthcare Research and Quality. Centers for Education and Research in Therapeutics (CERT) (U-19) Special Emphasis Panel. July 2011.
- 10. Swiss National Science Foundation. Drug Lag in Switzerland: Does it Exist and Why? June 2012.
- 11. Dutch Ministry of Health Grant Review. Optimizing the use of Over-the-Counter Medicines. October 2012.
- 12. Qatar National Research Fund Reviewer. November 2012.
- 13. Veterans Health Affairs Health Services Research and Development (HSR&D) Center of Innovation Review. February 2012.
- 14. Ad hoc reviewer. Agency for Healthcare Research and Quality. Health Care Research Training (HCRT) Study Section. January 2014 July 2015.

- 15. Ad hoc reviewer. Canadian Institutes of Health Research (CIHR). Review Committee for the Drug Safety and Effectiveness Network (DSEN) and the Strategy for Patient-Oriented Research (SPOR) Catalyst Grant: Methods in Post-Market Drug Safety and Effectiveness Research. January 2015.
- 16. Study section member. Agency for Healthcare Research and Quality. Health Care Research Training (HCRT) Study Section. August 2015 July 2018.
- 17. Chairman. Patient Centered Outcomes Research Institute. Clinical Strategies for Managing and Reducing Long-Term Opioid Use for Chronic Pain Merit Review. May 2016.
- 18. Chairman. Patient Centered Outcomes Research Institute. Clinical Strategies for Managing and Reducing Long-Term Opioid Use for Chronic Pain Merit Review. May 2017.
- 19. Chairman. Patient Centered Outcomes Research Institute. Assessment of Prevention, Diagnosis, and Treatment Options (APDTO) Program. August 2017.

### HONORS AND AWARDS

Honors	
1993	Cum Laude, University of Pennsylvania
1997	Alpha Omega Alpha, Case Western Reserve University
2003-2005	John A. Oremus Memorial Scholar (\$40,000 Research Stipend), MacLean
	Center for Medical Ethics, University of Chicago
2006	Top 5% of reviewers, Medical Care (also received annually through 2011)
2007	Top 10% of reviewers, Ann Intern Med (also received 2008, 2009, 2014)
2011	Elected Fellow of the American College of Physicians (FACP)
2011	Top Reviewers, Pharmacoepidemiology and Drug Safety (annually through 2014)
Awards	
2001	Edward W. Holmes Resident Research Award, University of Pennsylvania
2006-2009	Robert Wood Johnson Foundation Faculty Scholar Career Development Award
2007	Research Finalist, International Society for Pharmacoeconomics and Outcomes
	Research, Annual Meeting
2008	Outstanding Physician Scientist Award, Central Society for Clinical Research
2008	Career development award (\$10,000 Research Stipend), Central Society for Clinical
	Research
2008	Department of Medicine Research Award (awarded to trainee for mentored research;
	also received by mentored trainees in 2009 and 2010)
2009	Pritzker School of Medicine Sigma Xi Award for Impact on Science (awarded to
	trainee for mentored research)
2017	Americal Society of Health-System Pharmacy, Drug Therapy Research Award
	(awarded to trainee for mentored research and cv publication #144)

### **PUBLICATIONS**

Peer Reviewed Journal Articles (names of trainees are <u>underlined</u>)

- 1. Szele F, **Alexander GC**, Chesselet MF. "Expression of molecules associated with neuronal plasticity in the striatum after aspiration versus thermocoagulatory lesions in the adult cortex in adult rats." Journal of Neuroscience. 1995;15:4429-4448. PMID: 7790918
- 2. **Alexander GC**, Fera B, Ellis R. "From the students: learning continuous improvement by doing it." Joint Commission Journal on Quality Improvement. 1996;22:198-205. PMID: 8664952
- 3. **Alexander GC**, Sehgal AR. Dialysis patient assessments of the quality of medical care provided by generalists, nephrologists and other specialists. American Journal of Kidney Disease. 1998;32:284-289. PMID: 9708614
- 4. **Alexander GC**, Sehgal AR. Barriers to cadaveric renal transplantation among blacks, women, and the poor. JAMA. 1998;280:1148-1152. PMID: 9777814

Editorial: Milford EL. Organ transplantation--barriers, outcomes, and evolving policies. JAMA. 1998;280:1184-1185. PMID: 9777820

- 5. Lewin L, Agneberg B, **Alexander GC**. A course in end-of-life care for third year medical students. Academic Medicine. 2000:57:519-520. PMID: 10824792
- 6. **Alexander GC**, Sehgal AR. Why hemodialysis patients fail to complete the transplant process. American Journal of Kidney Disease. 2001;37:321-328. PMID: 11157373

Editorial: Chertow GM, Zenios SA. Gridlock on the road to kidney transplantation. American Journal of Kidney Disease. 2001;37:435-437. PMID: 11157389

- 7. Werner RM, **Alexander GC**, Fagerlin A, Ubel PA. The "hassle factor": How physicians respond when third party payers decline reimbursement for important health care services. Archives of Internal Medicine. 2002;162:1134-1139. PMID: 12020183
- 8. **Alexander GC**, Sehgal AS. Variation in access to kidney transplantation across dialysis facilities: using process of care measures for quality improvement. American Journal of Kidney Disease. 2002;40:824-831. PMID: 12324919

Editorial: Powe NR, Boulware LE. The uneven distribution of kidney transplants: getting at the root causes and improving care. American Journal of Kidney Disease. 2002;40:861-863. PMID: 12324926

- 9. **Alexander GC**, Werner RM, Fagerlin A, Ubel PA. Public support for physician deception of insurance companies. Annals of Internal Medicine. 2003;138:472-475. PMID: 12639080
- 10. **Alexander GC**, Wynia MK. Ready and willing? Physicians' sense of preparedness for bioterrorism. Health Affairs. September/October 2003;22:189-197. PMID: 14515895
- 11. **Alexander GC**, Casalino LP, Meltzer DO. Patient-physician communication about out-of-pocket costs. JAMA. 2003;290:953-958. PMID: 12928475

- 12. **Alexander GC**, Werner RM, Ubel PA. The costs of denying scarcity. Archives of Internal Medicine. 2004;164:593-596. PMID: 15037486
- 13. **Alexander GC**, Casalino LP, Tseng CW, McFadden D, Meltzer DO. Barriers to patient-physician communication about out-of-pocket costs. Journal of General Internal Medicine. 2004;19:856-860. PMCID: PMC1492500
- 14. **Alexander GC**, Tseng CW. Strategies to identify and assist patients burdened by out-of-pocket prescription costs. Cleveland Clinic Journal of Medicine. 2004;71:433-437. PMID: 15195778
- 15. Werner RM, **Alexander GC**, Fagerlin A, Ubel PA. Lying to insurance companies: the desire to deceive among physicians and the public. American Journal of Bioethics. 2004;4:1-7. PMID: 16192208
- 16. <u>Dai C</u>, Stafford RS, **Alexander GC**. National trends in Cox-2 inhibitor use since market release: non-selective diffusion of a selectively cost-effective innovation. Archives of Internal Medicine. 2005;165:171-177. PMID 15668363

Editorial: Solomon DH, Avorn J. Coxibs, science, and the public trust. Archives of Internal Medicine. 2005;165:158-160. PMID: 15668360

- 17. **Alexander GC,** Casalino LP, Metlzer DO. Physician strategies to reduce patients' out-of-pocket prescription costs. Archives of Internal Medicine. 2005;165:633-636. PMID: 15795338
- 18. Buss MK, **Alexander GC**, Switzer GE, Arnold RM. Assessing competence of residents to discuss end-of-life issues with patients. Journal of Palliative Medicine. 2005;8:363-371. PMID: 15890047
- 19. <u>Lang P</u>, <u>Schwarze M</u>, **Alexander GC**. New technologies meeting old professional boundaries: the emergence of carotid artery stenting. Journal of the American College of Surgery. 2005;200:854-860. PMID: 15922195
- 20. **Alexander GC**, <u>Mohajir N</u>, Meltzer DO. Consumers' perceptions about risk of and access to nonprescription medications. J Am Pharm Assoc. 2005;45:363-70. PMID: 15991758
- 21. Wang YR, **Alexander GC**, Meltzer DO. Lack of effect of guideline changes on LDL cholesterol reporting and control for diabetes visits in the U.S., 1995-2004. Diabetes Care. 2005;28:2942-4. PMID: 16306559
- 22. **Alexander GC**, <u>Kurlander J</u>, Wynia MK. Physicians in retainer ("concierge") practice: a national survey of physician, patient, and practice characteristics. Journal of General Internal Medicine. 2005;20:1079-83. PMCID: PMC1490281
- 23. **Alexander GC**, Lantos J. The doctor-patient relationship in the post-managed care era. American Journal of Bioethics. 2006;6:29-32. PMID: 16423784
- 24. Wang YR, **Alexander GC**, Meltzer DO. Screening and use of cholesterol-lowering drug therapy for primary and secondary prevention of coronary heart disease, 1999 and 2003. Managed Care Interface. 2006;19:25-30. PMID: 16453992
- 25. Piette J, Heisler M, Horne R, **Alexander GC**. A conceptually-based approach to understanding chronically-ill patients' responses to medication cost pressures. Social science and medicine. 2006;62:846-857. PMID: 16095789

- 26. Holmes HM, Cox-Hayley DM, **Alexander GC**, Sachs GA. Reconsidering medication appropriateness for patients late in life. Archives of Internal Medicine. 2006;166:605-609. PMID: 16567597
- 27. <u>Schwarze ML</u>, <u>Sayla MA</u>, **Alexander GC**. Exploring patient preferences for infrainguinal bypass surgery. Journal of the American College of Surgery. 2006;202:445-452. PMID: 16500249
- 28. **Alexander GC**, Delisser HM, Hansen-Flaschen J, Lantos J. Shoring up professionalism: building upon disagreements between house officers and attending physicians. Canadian Family Physician. 2006;52:286-287. PMCID: PMC1479701
- 29. **Alexander GC**, <u>Sayla MA</u>, Holmes HM, Sachs GA. Prioritizing and stopping prescription medicines. Canadian Medical Association Journal. 2006;174:1083-1084. PMCID: PMC1421477
- 30. **Alexander GC**, Hall M, Lantos J. Rethinking professional ethics in the cost-sharing era. American Journal of Bioethics. 2006;6:W17-W22. PMID: 16885085
- 31. Federman AD, **Alexander GC**, Shrank WH. Simplifying the Medicare Prescription Drug Benefit for physicians and patients. Mayo Clinic Proceedings. 2006;81:1217-1221. PMID: 16970218
- 32. Quinn MT, **Alexander GC**, Hollingsworth D, O'Connor KG, Meltzer DO, for the Corporate Contributions for Life Consortium. Design and evaluation of a workplace intervention to promote organ donation. Progress in Transplantation. 2006;16:253-259. PMID: 17007162
- 33. <u>Colker TR</u>, Casalino LP, **Alexander GC**, Lantos J. Should our well-child care system be redesigned? A national survey of pediatricians. Pediatrics. 2006;118:1852-1857. PMID: 17079554
- 34. **Alexander GC**, Larkin G, Wynia MK. Preparedness for bioterror and competing public health priorities: a national survey of primary care and emergency physicians. Academic Emergency Medicine. 2006;13:1238-1241. PMID: 16614456
- 35. Wang YR, **Alexander GC**, Stafford RS. Outpatient treatment and control of hypertension in Western Europe and the United States. Archives of Internal Medicine. 2007;167:141-147. PMID: 17242314
- 36. <u>Schwarze ML</u>, <u>Sayla MA</u>, <u>Alexander GC</u>. A comparison of patient and physician beliefs about infrainguinal bypass surgery: what role should surgical optimism play? Surgery. 2007;141:239-244. PMID: 17263981
- 37. Casalino LP, **Alexander GC**, Jin L, Konetzka T. General internists' views on pay-for-performance and public reporting of quality scores: a national survey. Health Affairs. 2007;26:492-499. PMID: 17339678
- 38. Pham HH, **Alexander GC**, O'Malley AS. Physician consideration of patients' out-of-pocket costs in making common clinical decisions. Archives of Internal Medicine. 2007;167:663-668. PMID: 17420424
- 39. <u>Torke A, Alexander GC</u>, Lantos J, Siegler M. The doctor-surrogate relationship. Archives of Internal Medicine. 2007;167:1117-1121. PMID: 17563018

- 40. <u>Kuwabara SA</u>, Van Voorhees BW, Gollan JK, **Alexander GC**. A qualitative exploration of depression in emerging adulthood. General hospital psychiatry. 2007;29:317-324. PMCID: PMC2769013
- 41. Tseng CW, Brook RH, Keeler E, Steers WN, **Alexander GC**, Waitzfelder BE, Mangione CM. Elderly patients' preferences and experiences with providers in managing their drug costs. Journal of the American Geriatrics Society. 2007;55:1974-1980. PMID: 17944892
- 42. <u>Phongsak SK</u>, Wynia MK, Gadon M, **Alexander GC**. Original Communication: A Qualitative Study of Physicians' Engagement in Reducing Health Care Disparities. Journal of the National Medical Association. 2007;99:1315-1322. PMCID: PMC2575935
- 43. Yin W, Basu A, Zhang J, <u>Rabbani A</u>, Meltzer DO, **Alexander GC**. Impact of the Medicare Part D Prescription Drug Benefit on drug utilization and out-of-pocket expenditures. Annals of Internal Medicine. 2008;148:169-177. PMID: 18180465

Editorial: Stuart B. Where are the Medicare Part D claims data? Annals of Internal Medicine. 2008;148:1-2. PMID: 18180463

- 44. **Alexander GC**, Zhang J, Basu A. Characteristics of patients receiving pharmaceutical samples and association between sample receipt and out-of-pocket prescription costs. Medical Care. 2008;46:394-402. PMID 18362819
- 45. **Alexander GC,** Lin S, <u>Sayla M</u>, Wynia MK, Writing for the Data Committee of the Commission to End Health Care Disparities. Development of a measure of physician engagement in addressing racial and ethnic health care disparities. Health Services Research. 2008;43(2):773-84. PMCID: PMC2442375
- 46. <u>Rabbani A</u>, Alexander GC. Out-of-pocket and total costs of fixed dose combination antihypertensives and their components. American Journal of Hypertension. 2008;21(5):509-13. PMID: 18437141

Editorial: Arredondo A. Out-of-pocket costs to users: medicine options for hypertension. American Journal of Hypertension. 2008;21:492–492. PMID: 18437138

- 47. <u>Torke A</u>, Simmerling M, Siegler M, Kaya D, **Alexander GC**. Rethinking the ethical framework for surrogate decision-making: a qualitative study of physicians. Journal of Clinical Ethics. 2008;19:110-119. PMID: 18767471
- 48. <u>Torke A, Alexander GC</u>, Lantos J. Substituted judgment: the limitations of autonomy in surrogate decision-making. Journal of General Internal Medicine. 2008;23:1514-1517. PMCID: PMC2518005
- 49. Zhang J, Yin W, Sun S, **Alexander GC**. Impact of the Medicare Prescription Drug Benefit on the use of generic drugs. Journal of General Internal Medicine. 2008;23:1673-1678. PMCID: PMC2533371
- 50. **Alexander GC**, Sehgal NL, <u>Moloney RM</u>, Stafford RS. National trends in treatment for Type 2 diabetes mellitus, 1994-2007. Archives of Internal Medicine. 2008;168:2088-2094. PMCID: PMC2868588
- 51. Epstein AJ, Rathore SR, **Alexander GC**, Ketcham J. Physicians' Views on Access to Prescription Drugs under Medicare Part D. American Journal of Managed Care. 2008;14:SP5-SP13. PMID: 18991482

- 52. Peek ME, Tang H, **Alexander GC**, Chin MH. National prevalence of lifestyle counseling or referral among African Americans with diabetes. Journal of General Internal Medicine. 2008;23:1858-1864. PMCID: PMC2585691
- 53. Walton SM, Schumock GT, Lee KV, **Alexander GC**, Meltzer D, Stafford RS. Prioritizing medications for policy and research initiatives examining off-label prescribing. Pharmacotherapy. 2008;28:1443-1452. PMID: 19025425
- 54. <u>Qato DM</u>, **Alexander GC**, Conti RM, Johnson M, Schumm P, Lindau ST. Use of prescription and overthe-counter medicines and dietary supplements among older adults in the United States: findings from a population-based study. JAMA. 2008;300:2867-2878. PMCID: PMC2702513
- 55. <u>Schwarze ML</u>, <u>Sayla MA</u>, <u>Alexander GC</u>. Do patients with poor outcomes regret having had infrainguinal bypass surgery? Journal of Surgical Research. 2009;151:6-9. PMID: 17644108
- 56. **Alexander GC**, Stafford RS. Does comparative effectiveness have a comparative edge? JAMA. 2009;301:2488-2490. PMID 19531789
- 57. <u>Rabbani A</u>, **Alexander GC**. Determinants of health care use among children: evidence from rural Bangladesh. Journal of Biosocial Science. 2009;41:645-660. PMID: 19531272
- 58. Chen DT, Wynia MK, Moloney RM, Alexander GC. Physician knowledge of the FDA-approved indications of commonly prescribed drugs: results of a national survey. Pharmacoepidemiology and Drug Safety. 2009;18:1094-100. PMID: 19697444
- 59. <u>Caskey R</u>, Lindau ST, **Alexander GC**. Knowledge and early adoption of the HPV vaccine among adolescent girls and young women: results of a national survey. Journal of Adolescent Health. 2009;45:453-462. PMID: 19837351
  - Editorial: Rodewald LE, Orenstein WA. Vaccinating adolescents new evidence of challenges and opportunities. Journal of Adolescent Health. 2009;45:427-429. PMID: 19837347
- Rathore SR, Ketcham J, Alexander GC, Epstein AJ. Influence of Patient Race on Physician Prescribing Decisions: A Randomized On-line Experiment. Journal of General Internal Medicine. 2009;11:1183-1191. PMCID: PMC2771231
- 61. <u>Rabbani A</u>, **Alexander GC**. Cost savings associated with filling a three month supply of prescription medicines. Applied Economics and Health Policy. 2009;7:255-264. PMID: 19905039
- 62. <u>Torke AM</u>, Siegler M, Abalos A, <u>Moloney R</u>, **Alexander GC**. Physicians' experience with surrogate decision making for hospitalized adults. Journal of General Internal Medicine. 2009;24:1023-1029. PMCID: PMC2726893
- 63. <u>Rabbani A</u>, **Alexander GC**. The impact of family structure on stimulant use among children with Attention Deficit Hyperactivity Disorder. Health Services Research. 2009;44:2060-2078. PMID: 19732168
- 64. **Alexander GC**, Humensky J, <u>Guerrero C</u>, <u>Park H</u>, Loewenstein G. Physician narcissism, ego threats, and confidence in the face of uncertainty. Journal of Applied Social Psychology. 2010;40:947-955.

- 65. Dorsey R, <u>Rabbani A</u>, <u>Gallagher SA</u>, Conti R, **Alexander GC**. The impact of black box warnings on the use of atypical antipsychotic medicines. Archives of Internal Medicine. 2010;170:96-103. PMID 20065205
  - Editorial: Rochon PA, Anderson GM. Prescribing optimal drug therapy for older people: sending the right message. Archives of Internal Medicine. 2010;170:103-106. PMID: 20065206
- 66. Basu A, Yin W, **Alexander GC**. The impact of Medicare Part D on Medicare-Medicaid dual-eligible beneficiaries' prescription utilization and expenditures. Health Services Research. 2010;45:133-151. (National Bureau of Economic Research [NBER] Working Paper #W14413) PMID: 20002765
- 67. <u>Cohen A, Rabbani A, Shah N, Alexander GC</u>. Changes in glitazone use among office-based physicians in the United States, 2003-2009. Diabetes care. 2010;33:823-825. PMCID: PMC2845035
- 68. <u>Torke AM</u>, <u>Moloney R</u>, Siegler M, Abalos A, **Alexander GC**. Physicians' views on the importance of patient preferences in surrogate decision making. Journal of the American Geriatrics Society. 2010;58:533-538. PMID: 20158556
- 69. Tseng C, Brook RH, **Alexander GC**, Hixon A, Keeler E, Mangione CM, Chen R, Jackson E, Adams Dudley R. Physicians' use of health information technology and knowledge of formularies, prescription copayments, and retail drug prices. American Journal of Managed Care. 2010;16:e105-e110. PMID: 2037031
- 70. <u>Lale A, Moloney RM</u>, **Alexander GC**. Academic medical centers and underserved communities: modern complexities of an enduring relationship. Journal of the National Medical Association. 2010;102:605-613. PMID: 20690324
- 71. <u>Saunders MR</u>, Cagney KA, Ross LF, Alexander GC. Neighborhood Poverty, Racial Composition and Renal Transplant Waitlist. American Journal of Transplantation. 2010;10:1912-1917. PMID: 20659097
- 72. <u>Qato DM</u>, Lindau ST, Conti RM, Schumm P, **Alexander GC**. Racial and ethnic disparities in cardiovascular medication use among older adults in the United States. Pharmacoepidemiology and Drug Safety. 2010;19:834-842. PMID: 20681002
- 73. Shah ND, Montori VM, Krumholz HM, Tu K, **Alexander GC**, Jackevicius CA. Geographic Variation in the Response to FDA Boxed Warnings for Rosiglitazone. N Engl J Med. 2010;22:2081-2084. PMID: 21083379
- 74. **Alexander GC**, <u>Gallagher SA</u>, Mascola A, <u>Moloney RM</u>, Stafford RS. Increasing off-label use of antipsychotic medicines, 1995-2008. Pharmacoepidemiology and Drug Safety. 2011;20:177-84. PMCID: PMC3069498
- 75. **Alexander GC**, O'Connor AB, Stafford RS. Enhancing prescription drug innovation and adoption. Annals of Internal Medicine. 2011;154:833-837. PMID: 21690598
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- 206. Saloner B, Levin J, Chang HY, Jones C, **Alexander GC**. Buprenorphine and Opioid Pain Relieve Use After the ACA Medicaid Expansion. JAMA Network Open. Publication pending
- 207. <u>Heyward J.</u> Padula W, Tierce J, **Alexander GC**. The Value of U.S. Pharmacopeial Standards: A Review of the Literature. Publication pending.
- 208. <u>Qato DM</u>, **Alexander GC**, Guadamuz J, Lindau ST. Use of Prescription Medicines and Dietary Supplements Among Children and Adolescents in the United States. Publication pending.
- 209. <u>Murimi IB</u>, Chang HY, Jones CM, Bicket M, **Alexander GC**. Using Trajectory Models to Assess the Effect of Hydrocodone Upscheduling Among Chronic Hydrocodone Users. Under review.
- 210. <u>Heyward J</u>, Jones CM, Compton WM, <u>Lin DH</u>, Losby JL, <u>Murimi IB</u>, Baldwin GT, Ballreich JM, Thomas D, Bicket M, Porter L, Tierce JC, **Alexander GC**. Coverage of Non-Pharmacologic Treatments for Lower Back Pain Among Public and Private Insurers in the United States. Under review.
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- 215. <u>Daubresse M</u>, **Alexander GC**, Crews DC, Segev DL, McAdams-DeMarco MA. Trends in Opioid Prescribing Among Hemodialysis Patients, 2007-2014. Under review.
- 216. <u>Bicket MC</u>, **Alexander GC**, Pronovost PJ, Yu C. Opioid Prescribing and Pain Management Optimization After Surgery. Under review.
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- 218. Pilla SJ, Segal JB, **Alexander GC**, Boyd CM, Maruthur NM. National Trends in Type 2 Diabetes Treatment Among Older and Younger Adults. Under review.
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- 26. Health IQ:2011. The Frontiers of Healthcare Advancement. IMS Institute for Healthcare Informatics. Diffusion of Innovation: Patterns and Effects. (Invited Chapter).
- 27. Alexander GC. Researcher's Corner: Talk Early and Often. SGIM Forum. 2011;34:5.
- 28. Dusetzina S, **Alexander GC**. Drug vs. Class-Specific Black Box Warnings: Does One Bad Drug Spoil the Bunch? Journal of General Internal Medicine. 2011;26:570-572. (invited editorial)
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- 40. <u>Fain K</u>, **Alexander GC**. Disposing of Medicines Safely. American Journal of Public Health. 2014;104:e2-3. (letter to the editor)
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- 43. **Alexander GC**, Keyes E. The Best Medicine: A Good Relationship With Your Doc. The Baltimore Sun. May 7, 2015. (OP-ED)

- 44. <u>Lyapustina T</u>, **Alexander GC**. The Prescription Opioid Epidemic: A Problem of Our Own Making. The Pharmaceutical Journal, 13 June 2015, Vol 294, No 7866, online | DOI: 10.1211/PJ.2015.20068579 (invited editorial)
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- 46. Dy S, Wegener S, **Alexander GC**, Suarez-Cuervo C, Bass E. Comparative Effectiveness of Alternative Strategies for Decreasing Initiation of Opioids for Managing Chronic Pain. PCORI Topic Brief. The Johns Hopkins Evidence Based Practice Center. February 2016.
- 47. <u>Qato DM</u>, Alexander GC. Fish Oils and Bleeding: Where Is the Evidence? In Reply. JAMA Internal Medicine. 2016;176(9):1406-1407.
- 48. <u>Barrett K</u>, <u>Lucas E</u>, **Alexander GC**. How Polypharmacy Has Become a Medical Burden Worldwide. The Pharmaceutical Journal. June 9, 2016. Available at: <a href="http://www.pharmaceutical-journal.com">http://www.pharmaceutical-journal.com</a>
- 49. <u>Murimi IB</u>, **Alexander GC**. Opiate overdose as a patient safety problem [Perspective]. AHRQ PSNet [serial online]. May 2017. Available at: https://psnet.ahrq.gov/perspectives/perspective/225.
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- 51. **Alexander GC**. Forward in Ali AK, Hartzema AG (eds). Post-Authorization Safety Studies of Medicinal Products: The PASS Book. In press.

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- 1. **Alexander GC,** Wynia MK. Survey research in bioethics. In "Empiric Methods for Bioethics: A Primer." Eds: Jacoby L, Siminoff LA. Elsevier Press, New York, New York, 2007".
- 2. Quinn MT, Gnepp J, **Alexander GC**, Hollingsworth D, O'Connor KG, Lang W, Klayman J, Meltzer DO. Design and Evaluation of Worksite Promotions of Organ Donation: Real-world Challenges and Practical Solutions. In "Understanding organ donation: applied behavioral science perspectives." Eds: Siegel JT, Alvaro EM. Blackwell/Claremont Applied Social Psychology Series. Wiley-Blackwell, Chichester, West Sussex, United Kingdom, 2010.
- 3. Saunders M, **Alexander GC**, Siegler M. Clinical ethics and the practice of hospital medicine. In "Principles and Practice of Hospital Medicine." Eds: McKean, Ross, Dressler, Brotman, Ginsberg. McGraw-Hill Companies, 2012 (2<sup>nd</sup> Edition printed 2016).
- 4. **Alexander GC**, Frattaroli S, Gielen AC, eds. The Prescription Opioid Epidemic: An Evidence-Based Approach. Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland: 2015

- 5. Citizen Petition to the Food and Drug Administration (Signatory). Requesting that the Commission to the FDA place a black box warning on pharmaceuticals in the opioid and benzodiazepine classes warning patients of the potential serious risks with concomitant use of both classes of medications. Submitted February 22, 2016. Petition granted August 31, 2016. Petition available at: <a href="http://health.baltimorecity.gov/sites/default/files/Final%20Draft%20FDA%20petition-Full%20Co-Signers-2.19.16%20(2)%20(1).pdf">http://health.baltimorecity.gov/sites/default/files/Final%20Draft%20FDA%20petition-Full%20Co-Signers-2.19.16%20(2)%20(1).pdf</a> (Accessed September 1, 2016).
- 6. Working Group Member. Transparency at the U.S. Food and Drug Administration: Recommendations to Support the Development of Safe and Effective Medical Products. October 2016.
- 7. Working Group Member. Partnership Forum: Navigating Innovations in Diabetes Care. Journal of Managed Care and Specialty Pharmacy. December 2016.
- 8. Sharfstein JM, Miller JD, Davis AL, Ross JS, McCarthy ME, Smith B, Chaudhry A, Alexander GC, Kesselheim AS. Blueprint for Transparency at the U.S. Food and Drug Administration: Recommendations to Advance the Development of Safe and Effective Medical Products. January 22, 2017.
- 9. **Alexander GC**, Frattaroli S, Gielen AC, eds. The Opioid Epidemic: From Evidence to Impact. Johns Hopkins Bloomberg School of Public Health, Baltimore, Maryland: 2017.

# Other

Designed and hosted a web site devoted to patient education and empowerment regarding prescription costs and polypharmacy. Previously available (2005-2012) at: <a href="http://prescriptions.bsd.uchicago.edu/">http://prescriptions.bsd.uchicago.edu/</a>

### **CURRICULUM VITAE**

G. Caleb Alexander, MD, MS

#### **PART II**

# **TEACHING (Johns Hopkins University, 2012-present)**

### *Graduate students (iMPH or MPH Advisor)*

- Vibhuti Arya, PharmD; Academic Advisor for Part-time iMPH Program, 2012-2016
- Haley Gibbs, PharmD; Academic Advisor for Part-time iMPH Program, 2012-2015
- Ayu Katada; Academic Advisor for MPH Program (MPA/MBA Dual Degree), 2012-2014
- Etka Argawal; Academic Advisor for MPH Program in Epidemiologic and Biostatistical Methods for Public Health and Clinical Research, 2013-2014
- Lee Meller, MD; Academic Advisor for Part-time iMPH Program, 2013-2014
- Sharonjit Sagoo, PharmD; Academic Advisor for Part-time iMPH Program, 2015-
- Carolyn Tieu, PharmD, Academic Advisor for MPH Program, 2016-2017
- Ken Ogasawara, PhD, Academic Advisor for MPH Program, 2016-2017
- Denise Lepley, Academic Advisor for Part-time iMPH Program, 2017

# *Graduate students (MHS Advisor)*

- Francine Chingcuanco; Academic Advisor for MHS Program in Cardiovascular Epidemiology, 2014-2016
- Geetha Ayer; Academic Advisor for ScD Program in Cardiovascular Epidemiology, 2014-2016
- Meijia Zhou; Academic Advisor for MHS Program in General Epidemiology and Methodology, 2012-2014
- Jeffrey Yu; Academic Advisor for MHS Program in Health Economics, 2017-2018

# *Graduate students (Capstone or Thesis Advisor)*

- Ayu Katada; Academic Advisor for MPH Program (MPA/MBA Dual Degree), 2012-2014
- Jinhee Moon, MHS; Capstone Advisor for MPH Program, 2012-2013 (Outstanding Achievement Award)
- Steven Jones; Capstone Advisor for MPH Program, 2012-2013
- David Nartey; Capstone Advisor for MPH Program, 2012-2013
- Tatyana Lyapustina; Capstone Advisor for MPH Program (MD/MPH Dual Degree), 2014-2015
- James Goldberg; Capstone Advisor for iMPH Program, 2015-2016
- Zova Fansler; Capstone Advisor for Part-time iMPH Program, 2015-2016
- Jeong Ah Cho; Capstone Advisor for MPH Program (MPH/MBA Dual Degree), 2016-2017
- Shengyuan (David) Luo; Thesis Co-Advisor for MHS Program, 2016-2018
- Yunwen Xu; Thesis Advisor for MHS Program, 2016-2018
- Omar Mansour; Thesis Advisor for MHS Program, 2016-2018

# Graduate Students (Doctoral Advisor or Dissertation Committee Member)

- Kevin Fain, Dissertation Committee Member (DrPH/Epidemiology), 2012-2015
- Jingwen Tan, Dissertation Committee Member (PhD/Clinical Epidemiology), 2012-2016
- Shilpa Viswanathan, Dissertation Committee Member (PhD/Clinical Epidemiology), 2012-2015
- Richard Scott Swain, Dissertation Committee Member (PhD/Clinical Epidemiology), 2013-2015
- Christopher Kaufman, Dissertation Committee Member (PhD/Mental Health), 2013-2015
- Christine Buttorff, Dissertation Committee Member (PhD/Health Policy and Management), 2012-2014

- Remingon Nevin, Dissertation Committee Member (PhD/Mental Health), 2014-2017
- Mariana Socal, Dissertation Committee Member (PhD/Mental Health), 2014-2017
- Lisa Selker, Dissertation Committee Member (PhD/University of North Carolina Rollings School of Public Health), 2015-
- Sheriza Bakst, Doctoral Advisor (PhD/Epidemiology), 2015-
- Alex Secora, Doctoral Advisor (PhD/Epidemiology), 2016-
- Lucy Qiao, Doctoral Co-Advisor (PhD/Epidemiology), 2017-

# Other Trainees (Post-doctoral or beyond)

- Kevin Riggs, MD; Mentor for research program examining generic utilization and effect of drug coupons on drug utilization and expenditures, 2013-2016
- Mark Bicket, MD; Mentor of career development award activities focused on utilization, safety and effectiveness of prescription opioids in peri-operative setting, 2016-

#### Classroom Instruction

- Designer and Instructor, Pharmacoepidemiology: Drug Utilization, 2014-present (340.684.01)
- Co-Instructor, Design of Epidemiologic Studies: Proposal Development & Critique, 2015-present (340.715.01)
- Lecturer, Epidemiology of Aging (340.616.01)
- Lecturer, Pharmacoepidemiology Methods (340.682.01)
- Small Group Facilitator: Clinical Epidemiology, Johns Hopkins School of Medicine, 2014-2016
- Graduate Summer Institute of Epidemiology and Biostatistics: Pharmacoepidemiology (340.617.11)
  - o Lecturer, 2012-2016
  - o Designer and Co-Instructor, 2017-present

# Other significant teaching

- Participate in informal mentoring with dozens of students through works in progress, journal clubs and seminar series within the Departments of Epidemiology (School of Public Health) and the Division of General Internal Medicine (Johns Hopkins Medicine)
- Co-lead Special Seminar Series "Pharmaceutical Safety, Value and Innovation" sponsored by Center for Drug Safety and Effectiveness

# **TEACHING (University of Chicago, 2001-2012)**

### *Undergraduate students*

Mounica Yanamandala, University of Chicago, Primary mentor (2009-2011)

Regina Depietro, University of Chicago, Primary mentor (2009-2011)

Mateusz Ciejka, University of Chicago, Primary mentor (2009-2010)

Sarah Gallagher, University of Chicago, Primary mentor (2008-2009)

Maliha Darugar, University of Chicago, Primary mentor (2003-2006)

Nadiah Mohajir, Harris School for Public Policy, Honors thesis advisor (2002-2003)

Diane McFadden, University of Chicago, Primary mentor (2002-2003)

#### Graduate students

Frank Liu, Department of Pharmacy Administration, College of Pharmacy, University of Illinois at Chicago, Thesis committee (2008-2010)

Teri Arthur, PhD, MSW, Social Services Administration, Dissertation Committee (2004-2008)

Carolanne Dai, PhD, Harris School of Public Policy, Dissertation Committee (2002-2007)

Sachiko Kuwabara, BA, Masters of Arts, University of Chicago (2004-2006) Melissa Brown, BA, Masters of Arts, University of Chicago (2005-2006)

#### Medical students

Erica MacKenzie, BA, Research Mentor (2011)

Daniel Kozman, BA, Research Mentor (2010)

Jessica Pirella, BA, Research Mentor (2010)

Andrew Cohen, BA, Research Mentor (2009)

Michelle Stacey, BA, Research Mentor (2009)

Karen Draper, BA, Research Mentor (2008)

Allison Lale, BA, Research Mentor (2008)

Rob Guzy, MD, PhD, Residency Advisor (2007)

Susanne Phongsak, BA, Research Mentor (2006)

Cesar Guerrero, BA, Research Mentor (2006)

Patrick Lang, BA, Research Mentor (2004)

Charles Kaufmann, MD, PhD, Residency Advisor (2004-2005)

Stephanie Takahashi, MD, Residency Advisor (2005-2006)

#### Residents

Victoria Wong, MD, Editorial fellow, Journal of General Internal Medicine (2009-) Femi Aboyeji, MD, Research elective mentor (2007)

#### *Fellows*

Jonas DeSouza, MD (2010-2012)

David Brush, MD (2009-2012)

Milda Saunders, MD, MPH (2008-2012)

Health services research fellows. University of Chicago (2004-2012)

MacLean Center for Clinical Medical Ethics, Lecturer (2003-2012)

Rachel Caskey, MD, Primary mentor (2006-2008)

Alexia Torke, MD, HRSA Fellow, Primary mentor (2005-2007)

Tumaini Colker, MD, MBA, Robert Wood Johnson Clinical Scholar (2005-2006)

Gretchen Schwarze, MD, MPH, Vascular Surgery (2003-2006)

# Post-doctoral fellows

Dima Qato, PharmD, MPH, PhD (2011)

Atonu Rabbani, PhD (2007-2009)

### Classroom Instruction

Lecturer, The doctor-patient relationship in clinical practice (2002-2011)

Lecturer, MacLean Center for Clinical Ethics Summer Intensive (2003-2011)

Designer and lecturer, Research Design Course for RWJF Clinical Scholars (2004-2006)

Designer and lecturer, Research Design Course for Fellow Summer Intensive (2004-2006)

Lecturer, Introductory Course on the fundamentals of health services research

### Other significant teaching

Group leader for medical student summer research program (2004-2011)

National Youth and Leadership Forum, Faculty participant (2005-2010)

Participant in 1:1 Mentoring Program, Society of General Internal Medicine, 2007

### RESEARCH GRANT AND CONTRACT PARTICIPATION

Current support

Grant: 1 T32 HL139426-01; 12/27/2017 – 12/26/2022; National Heart, Lung and Blood Institute

(Alexander/Segal)

Purpose: To optimize the safe and effective use of medicines to treat heart, lung and blood diseases

Grant: 1R01DA044987-01; 9/30/2017 – 7/31/2021; National Institutes of Drug Abuse (McGinty/Rutkow)

Purpose: To quantify the effect of state laws intended to curb high-risk opioid prescribing

Grant: 1R01DA042738-01; 02/01/17–11/30/20; National Institutes of Drug Abuse (Rutkow)

Purpose: To assess the association between clean indoor air laws, cigarette taxes, and use of smoking

cessation treatments

Grant: 1 U01 FD005942-01; 9/1/2016-8/31/2018; Food and Drug Administration (Alexander)

Purpose: To enhance regulatory science through a unique FDA-academic partnership (CERSI)

Grant: 8/1/17-7/31/18; The Arnold Foundation (Andersen)

Purpose: To evaluate and advance policy recommendations to achieve a "fair price" of high cost prescription

drugs

Past support (selected list)

Grant: 5/5/2017- 1/30/2018; Department of Health and Human Services/ASPE (Alexander)

Purpose: To describe the breadth and depth of coverage policies for acute and chronic back pain among a

nationally representative selection of Medicaid, Medicare Advantage and commercial health plans

Grant: 7/1/2016-4/4/2017; AstraZeneca (Alexander)

Purpose: To quantify the disease burden and resource utilization associated with Systemic Lupus

Erythematosus (SLE)

Grant: 12/2/2016-6/30/2017; AstraZeneca (Alexander)

Purpose: To characterize the association between organ damage, quality of life, and mortality among patients

with Systemic Lupus Erythematosus (SLE)

Grant: ID# 72452; 2/15/2015-1/31/2017; Robert Wood Johnson Foundation (Rutkow)

Purpose: To understand the role of interorganizational relationships, information sharing and legally established infrastructure on prescription drug monitoring programs' function and impact within the public

health system

Grant # U01FD005556: 09/15/15-08/31/16; Food and Drug Administration (Varadhan)

Purpose: To develop structural nested models to assess safety and effectiveness of generic drugs

Grant: 1 R01 HL 107345-01; 4/1/11-3/31/15; NHLBI (Alexander, Co-PI)

Purpose: To examine the effect of DTCA on prescription and non-prescription health care utilization

Grant: 1 R01 AG034187-01; 7/1/2012-6/30/2015; National Institutes on Aging (Kaestner)

Purpose: To determine if Part D Prescription Coverage Improves Health and Reduces Inpatient Use

Grant: 1 UO1 CE002499-01; 9/1/2014-9/1/2016; Center for Disease Control and Prevention (Alexander) Purpose: To evaluate the effect of Florida's Pill-Mill Law on opioid prescribing, utilization and dispensing

Grant: ID# 24741; 7/1/2014-1/1/2016; Robert Wood Johnson Foundation (Alexander)

Purpose: To evaluate the effect of Prescription Drug Monitoring Programs on opioid prescribing, utilization and dispensing

Grant: 1 R01 HS 018960–01; 8/1/10-7/31/14; Agency for Health Care Quality and Research (Alexander)

Purpose: To assess the effect of FDA advisories on provider, patient, and firm behavior

Grant: 1 K08 HS15699-01A1; 2/01/06-2/01/11; Agency for Health Care Quality and Research (Alexander)

Purpose: To conduct a randomized trial to reduce patient's out-of-pocket prescription costs

Grant: Robert Wood Johnson Physician Faculty Scholars Award; 7/1/06-6/30/09; RWJ Foundation (Alexander)

Title: Development and evaluation of interventions to reduce patients' prescription costs

Contract: IMS Health Services Research Network; 10/1/10-12/31/11; IMS Health (Alexander)

Purpose: To develop and promote academic research network using IMS Health's data assets to address questions relevant to health care reform

Grant: UL1RR024999; 12/1/09-11/30/10; CTSA Institutional Pilot (Alexander)

Purpose: To quantify the impact of FDA advisories on psychotropic medication use among children

Grant: The University of Chicago Program for Pharmaceutical Policy; 2/01/05-6/1/09; The Merck Foundation (Meltzer)

Purpose: To foster innovative research at the University of Chicago in pharmaceutical policy with a focus on regulation, innovation, and technology assessment

Contract: HHSA 290 200 500 381; 9/16/05-9/15/10; Agency for Health Care Quality and Research (Schumock) Title: Chicago Area Pharmaceutical Outcomes Research Consortium. Developing Evidence to Inform Decisions about Effectiveness: The DEcIDE Network

Grant: The Greenwall Foundation; 7/1/10-6/30/11 (Alexander)

Purpose: To conduct a mixed-methods study to examine management of conflict between physicians and surrogates of critically ill adults

Grant: Center for Education and Research on Therapeutics (CERT); 09/01/07 – 3/31/11; Agency for Health Care Quality and Research (Meltzer)

Purpose: To create an education and research infrastructure that produces and disseminates knowledge to improve the effectiveness and cost-effectiveness of the use of therapeutics

Grant: Mixed-methods exploration of the adoption of the HPV Vaccine; 10/1/07-9/30/08; University of

Chicago Program for Pharmaceutical Policy Pilot Grant (Alexander)

Purpose: To establish prevalence and determinants of HPV vaccine uptake

Contract: HHSA29020050038I; 9/15/06-1/29/07; AHRQ (Walton)

Purpose: To develop a method of prioritization of research efforts on off-label drug use

Grant: R39OT03411-01-00; 10/01/04-09/30/07; Health Resources and Services Administration Division of Transplantation (Lang)

Purpose: To develop, implement, and assess workplace intervention to increase organ donor intention

Grant: The Medicaid Pharmacy Cost Containment and Patient Outcomes; 7/1/06-6/30/07; Center for Health and the Social Sciences - University of Chicago Pilot Grant (Alexander)

Purpose: To examine association between Medicaid cost-containment policies and clinical outcomes

Grant: Donald W. Reynolds Foundation; 9/1/03-8/31/07; National Institute of Aging (Sachs)

Purpose: Faculty Development in Geriatrics

Grant: Robert Wood Johnson Foundation Clinical Scholars Program; 7/1/03-7/1/06; Robert Wood Johnson Foundation (Lantos)

Purpose: To provide a post-residency academic program that trains scholars to apply pure research methods to health-related problems.

Grant: 1 H39 OT 00086-01; 10/01/01-09/30/04; Health Resources and Services Administration Division of Transplantation (Lang)

Purpose: To develop, implement, and assess a corporate workplace intervention designed to increase intention to become an organ donor

Grant: 5 K12 AG00488; 09/01/96-08/31/04; National Institute of Aging (Sachs)

Purpose: Geriatric Academic Program Award

#### ACADEMIC SERVICE

2016	Faculty Search Committee (John Jackson), Department of Epidemiology, JHSPH
2015	Faculty Search Committee (Mara McAdams), Department of Epidemiology, JHSPH
2015	Faculty Search Committee, Johns Hopkins Berman Institute of Bioethics
2014-2015	Graduate Training Program in Clinical Investigation (GTPCI) Review Committee
2014-2017	Admissions and Credentials Committee, Department of Epidemiology, JHSPH
2014-	Technology Transfer Committee, JHSPH
2013-2017	Curriculum Committee, Department of Epidemiology, JHSPH
2010-2012	Diabetes Research and Training Center, University of Chicago
2006-2010	Biological Sciences Division Institutional Review Board Member
2006	Steering Committee, Conference on Pharmaceutical Policy, Chicago, Illinois
2006-2008	Steering Committee, DOM Research Day, University of Chicago
2006-2008	Steering Committee, UOC Program in Pharmaceutical Policy, University of Chicago
2005-2006	Search Committee, UOC Comprehensive Cancer Center, Population Science Director
2003-2012	MacLean Center Ethics Committee, University of Chicago
2003-2008	Medicine and the Social Sciences, Co-Chair, University of Chicago
2000-2001	General Medicine Interest Group, Co-Chair, UPHS
2000-2001	Residency Review Committee, Class Officer, UPHS
1999-2001	Hospital of the University of Pennsylvania Ethics Committee, UPHS
1996-1997	Rainbow Babies and Children's Hospital Ethics Committee, CWRU
1994-1996	Class Officer and Chair, Committee of Student Representatives, CWRU

### **INVITED SEMINARS**

# Local or Regional Seminars

- 1. Racial differences in access and outcomes of kidney transplantation. Workshop on medicine and the social sciences. University of Chicago. November 2002.
- 2. Public support for physician deception of insurance companies. Council on ethical and judicial affairs, American Medical Association. Chicago, IL. April 2003.
- 3. Truth and lies: are the rules different for lawyers? Panel discussion at the American Bar Association Conference on Professional Responsibility. May 2003.
- 4. Patient-physician communication about out-of-pocket costs. Northwestern University, December 2002.
- 5. Patient-physician communication about out-of-pocket costs. Program in Medicine, Arts, and the Social Sciences. University of Chicago. Feb 2004.
- 6. Patient-physician communication about out-of-pocket costs. Program in Medicine, Arts, and the Social Sciences. University of Chicago. February 2004.
- 7. Is prescription choice rational? By whose standards? Pharmaceutical innovation and regulation: an American dilemma. Faculty workshop, University of Chicago. February 2004.
- 8. The doctor-patient relationship in the post-managed care era. American Medical Association. Chicago, IL. May 2004.
- 9. National trends in Cox-2 inhibitor use since market release: the non-selective diffusion of a selectively cost-effective innovation. Center for Pharmacoeconomics Research, University of Illinois School of Pharmacy. July 2004.
- 10. Division of Geriatrics Grand Rounds, University of Chicago Hospitals. A framework for medication prioritization and discontinuation. December 2004.
- 11. Department of Medicine Grand Rounds, University of Chicago Hospitals. Pharmaceutical innovation and the doctor-patient relationship: understanding the diffusion of Cox-2 inhibitors from 30,000 feet to the ground level. February 2005.
- 12. Bioethics Interest Group, Stritch School of Medicine, Layola University. Physician deception of insurance companies. April 2005.
- 13. Midwest Center for Health Services and Policy Research. Hines Veterans Affairs System, Hines, IL. The diffusion of pharmaceutical innovation in the Veterans Affairs Health System. November 2005.
- 14. American Medical Student Association Panel Discussion. Pritzker School of Medicine, University of Chicago. Discussed role of industry in physician education and prescribing. November 2005.
- 15. Bioethics Interest Group. Pritzker School of Medicine, University of Chicago. Empiric ethics . . . or . . . what do numbers have to do with right and wrong? February 2006.

- 16. Chicago Medical Society. Panel discussion on medical ethics. Holiday Inn Chicago Mart Plaza. Chicago, IL. March 2006.
- 17. Ethics dinner discussion with students from Pritzker Medical School, University of Chicago, May 2006.
- 18. The road less traveled career paths in general internal medicine. National Youth Leadership Forum on Medicine, Chicago, IL. June 2006.
- 19. The Union League. Ethics considerations in pandemic planning. Chicago, IL. October 2006.
- 20. Attention: You have just entered the cost-sharing era: ethical, policy, and clinical considerations. Department of Medicine Research Series, December 2006.
- 21. Pharmacothis and pharmacothat: exploring topics in pharmaceutical research. University of Chicago Division of General Medicine Outcomes Group. March 2007.
- 22. Thinking globally, acting locally: a Chicagoland collaboration to unravel the impact of the Medicare Prescription Drug Benefit. TAP Pharmaceuticals. Chicago Midwest ISPOR Meeting. April 2007.
- 23. What do general internists do, and why? National Youth Leadership Forum on Medicine, Chicago, IL. June 2007.
- 24. The best of times, the worst of times: clinical decision-making and prescription choice in the 21<sup>st</sup> Century. Department of Otolaryngology. University of Chicago. October 2007.
- 25. What do we know about health care provider interaction with the pharmaceutical industry? University of Illinois Medical Center at Chicago Clinical Ethics Conference. March 2008.
- 26. Asking the right question(s) and getting funded to do so. University of Illinois at Chicago Advanced methods and grant writing workshop. March 2008.
- 27. Challenges and opportunities examining the off-label use of prescription medicines. Institute for Healthcare Studies. Northwestern University, Chicago, IL, May 2008.
- 28. Improving pharmacotherapy during outpatient care. Primary care medicine today (PRIMED) conference. Rosemont, IL, February 2009.
- 29. Choosing a research question: the perennial dilemma of "what shall I study"? Midwest Hospitalist Meeting. Chicago, IL. October 2009.
- 30. Conflicts of interest in medicine. Pritzker School of Medicine, University of Chicago. May 2010.
- 31. Using social network methods to study prescription drug uptake and diffusion. Department of Health Studies. University of Chicago. November 2010.
- 32. Managing risk through ethical practice. ISMIE Mutual Insurance Company. Chicago, IL 2010.
- 33. Overview of Clinical Epidemiology, in Fundamentals of Epidemiology. Johns Hopkins Krieger School of Arts and Sciences. November 2012.

- 34. The Prescription Opioid Epidemic: In Search of Mission Control.
  - Johns Hopkins Welch Center for Prevention, Epidemiology and Clinical Research Grand Rounds. December 2012.
  - University of Maryland Department of Pharmaceutical Health Services Research. April 2013.
  - Johns Hopkins Department of Medicine Osler Grand Rounds, October 2013.
  - Anne Arundel Medical Center Department of Medicine Grand Rounds, January 2014.
- 35. Drugs and Aging, in Epidemiology of Aging. Johns Hopkins Bloomberg School of Public Health. May 2013.
- 36. Career Development, in Public Health Economics Seminar. Johns Hopkins Bloomberg School of Public Health. September 2013.
- 37. The Effect of FDA Risk Communications on Patient, Provider and Firm Behavior. Johns Hopkins Department of Psychiatry Research Conference, December 2013.
- 38. Managing Prescription Opioids In Workers Compensation Programs. American Insurance Association. Washington, DC. June 2014.
- 39. Secondary Data Analysis. General Internal Medicine Fellows Conference. Johns Hopkins Medicine. Baltimore, MD. September 2014.
- 40. Center for Medical Technology Policy (CMTP) Green Park Collaborative Annual Meeting. "Real World Evidence Defining What "Good" Looks Like". Panel Discussion. April 2015.
- 41. Safety, Efficacy and Pharmacokinetic Bioequivalence of Biosimilar TNF-α Inhibitors Compared with their Reference Biologics: A Systematic Review. Department of Clinical Pharmacology, Johns Hopkins Hospital. February 2016.
- 42. Reducing Prescription Drug Spending: A Review of Policy Options. Johns Hopkins Bloomberg School of Public Health. March 2016.
- 43. Keynote. Managing the Unmanageable: Reining in the Opioid Epidemic. CareFirst. Baltimore, Maryland, June 2017.

### National or International Seminars

- 44. Panel discussion of interdisciplinary health professions education. Ohio League of Nursing Annual Meeting, Cleveland, Ohio, October 1996.
- 45. Grand Rounds, Department of Medicine, University of Pennsylvania: Pharmaceutical industry sponsorship of continuing medical education: training physicians or marketing products? June 2001.
- 46. Patient-physician communication about out-of-pocket costs. University of Michigan, January 2003.
- 47. Patient-physician communication about out-of-pocket costs. MetroHealth Medical Center, January 2003.

- 48. "Luxury care", professional standards, and personal choice: ethical and professional issues in retainer medical practices. Panel discussion at the American Society of Bioethics and Humanities Annual Meeting. October 2004.
- 49. Ad hoc pharmacoeconomics working group. AstraZeneca LP. Patient-physician communication about out-of-pocket costs. June 2005.
- 50. How much should \$38 billion buy? The uptake and impact of the Medicare Part D Prescription Benefit. Department of Medicine. VA Center for Health Equity Promotion and Research and University of Pittsburgh Department of Medicine. December 2007.
- 51. The Medicare Modernization Act Prescription Drug Benefit. Department of Ambulatory Care and Prevention, Harvard Medical School. January 2008.
- 52. Principles of survey research. Patan Academy of Health Sciences. Kathmandu, Nepal, April 2008.
- 53. Health care publishing in the peer-reviewed literature. Patan Academy of Health Sciences. Kathmandu, Nepal, April 2008.
- 54. Impact of FDA regulatory advisories on patient, provider and firm behavior. Mayo Clinic, April 2010; Virginia Commonwealth University, October 2010; Yale University, November 2010; Johns Hopkins University School of Medicine, November 2010; Johns Hopkins University School of Public Health, June 2011.
- 55. Special Guest: FED UP: Rally for a Federal Response to the Opioid Epidemic, National Sylvan Theater Stage at the Washington Monument, Washington DC, September 2014.
- 56. Panelist: Art and Science of Scientific Communications. CBI Advanstar. Publication Planning Forum. Philadelphia, PA. December 2014.
- 57. CMS Grand Rounds: The Opioid Epidemic. CMS Headquarters, Baltimore, MD. November 2015.
- 58. Panelist: Drug Safety and Surveillance. FDA/CMS Summit. IIR/IBC Life Sciences. Ritz Carlton Hotel, Washington DC, December 2015.
- 59. Special Guest: The Opioid Epidemic. American Insurance Association: Workers' Compensation Committee. Washington DC, February 2015.
- 60. Safety, Efficacy and Pharmacokinetic Bioequivalence of Biosimilar Tumor Necrosis Factor-alpha Inhibitors Compared with their Reference Biologics: A Systematic Review. Harvard Pilgrim Health Care. March 2016.
- 61. The Opioid Epidemic. Johns Hopkins Department of Pharmacy Grand Rounds. May 2016.
- 62. Guest Speaker: Innovations in Diabetes Care. Academy of Managed Care Pharmacy. Alexandria, Virginia, July 2016.
- 63. Panelist: Needed Changes in Federal Policy and Legislation to Address Nation's Opioid Crisis. Educational Briefing for Congressional Members and Staff. Washington, DC, September 2016.

- 64. Panelist: Balancing Opioid Access and Use. Academy of Managed Care Pharmacy Annual Research Symposium. Alexandria, Virginia, October 2016.
- 65. Keynote. An Evidence-Based Approach to the Opioid Epidemic. National Academy for State Health Policy. Pittsburgh, Pennsylvania, October 2016.
- 66. Special Guest Speaker. Science, Public Health and the Prescription Opioid Industry. Motley Rice LLC. Washington, DC, June 2017.
- 67. Guest Speaker. Opioid Prescribing Practices. Bloomberg Philanthropies. January 2018.
- 68. Plenary Speaker. Conundrums in Biotechnology: How Does Quality Impact Safety. World Congress of Biopharmaceuticals. Washington, DC, February 2018.
- 69. Special Invited Speaker. "Covering the Opioid Crisis". National Press Foundation. Washington, DC, February 2018.
- 70. Guest Panelist. "Addressing Prescription Drug Costs". Johns Hopkins Carey School of Business Drug Accessibility and Pricing Symposium. Baltimore, MD, March 2018.
- 71. Guest Panelist. "Best Practices in Opioid Prescription, Pain Management, Medicine-Assisted Treatment and Recovery: New Models of Care for Opioid Use Disorder". Modern Healthcare Opioid Symposium. Baltimore, MD, April 2018.
- 72. Invited Speaker. "Comparative Safety of NSAIDs and Opioids Among Hospitalized Patients: A Case Study". Premier Annual Breakthroughs Conference. Nashville, TN, June 2018.
- 73. Guest Speaker. National Governor's Association. Opioid Coverage Policy Roundable. Washington, DC, June 2018.

#### **NARRATIVE**

G. Caleb Alexander, MD, MS is an Associate Professor of Epidemiology and Medicine at Johns Hopkins Bloomberg School of Public Health, where he serves as a founding co-Director of the Center for Drug Safety and Effectiveness and Principal Investigator of the Johns Hopkins Center of Excellence in Regulatory Science and Innovation (CERSI). He is a practicing general internist and pharmacoepidemiologist and is internationally recognized for his research examining prescription drug utilization, safety and effectiveness. Dr. Alexander is the author of over 250 scientific articles and book chapters, and he has published regularly in leading scientific journals including JAMA, Health Affairs and the Annals of Internal Medicine. He is a frequent speaker on health care issues and has served on numerous editorial and advisory boards. Due to its impact and relevance to a broad sector of the general public, his work has been widely featured in a media including the Economist, Scientific American, the New York Times, the Wall Street Journal, Washington Post, National Public Radio and other media. Dr. Alexander's research focuses on population-based patterns and determinants of pharmaceutical use, clinical decision-making regarding prescription drugs, and the impact of changes in regulatory and payment policy on pharmaceutical utilization. In addition to expertise

conducting survey-based investigations, he has also extensive experience with the analysis of secondary data sources including administrative claims and large national surveys. Dr. Alexander received his B.A. cum laude from the University of Pennsylvania, an MD from Case Western Reserve University, and a Master of Science from the University of Chicago.

# **KEYWORDS**

Pharmacoepidemiology, medication use, pharmaceutical policy, patient-physician communication, general internal medicine