

REED FRANCIS BEALL

Assistant Professor in Healthcare Policy
Department of Community Health Sciences
Cumming School of Medicine
O'Brien Institute for Public Health
University of Calgary,
3280 Hospital Drive NW
Calgary, AB T2N 4Z6 Canada
Reed.Beall@ucalgary.ca
403.220.7452

Affiliated Faculty
Program on Regulation, Therapeutics, and Law (PORTAL)
Brigham and Women's Hospital / Harvard Medical School
Department of Medicine
Division of Pharmacoepidemiology and Pharmacoeconomics
1620 Tremont St, Suite 3030
Boston, MA 02120 United States
rbeall@bwh.harvard.edu

BIOGRAPHY

Reed F. Beall is a population health researcher who works largely with medicine patent, regulatory, and utilization data to investigate the long-term impacts of national and international policy decisions which aim to balance incentives between equitable drug innovation and equitable drug access. He is an Assistant Professor in Healthcare Policy in the Department of Community Health Sciences within the Cumming School of Medicine and at the O'Brien Institute for Public Health. He also serves as affiliated faculty for the Program on Regulation, Therapeutics, and the Law (PORTAL) based within the Division of Pharmacoepidemiology and Pharmacoeconomics at the Brigham and Women's Hospital and Harvard Medical School. He has been invited to provide testimony on his research to the trilateral technical symposium of the World Health Organization, the World Intellectual Property Organization, and the World Trade Organization, as well as to the United Nations Secretary-General's High-Level Panel on Access to Medicines. His work has been published in Nature Biotechnology, Health Affairs, Value in Health, Social Science and Medicine, Globalization and Health, among others.

EDUCATION

Postdoctoral Research Fellowship (2018), Program on Regulation, Therapeutics, and Law, Brigham and Women's Hospital/ Harvard Medical School, Boston

Ph.D., Population Health (2017), University of Ottawa, Canada

Graduate Certificate in Global Health Affairs (2010), University of Denver

M.A., International Studies & International Political Economy (2010), University of Denver

B.A., Philosophy & Religious Studies, *magna cum laude*, *Phi Beta Kappa* (2004),
University of Colorado at Boulder

RESEARCH EXPERIENCE

2017 – 2018 **Postdoctoral Research Fellow**
Program on Regulation, Therapeutics, and Law (PORTAL)
Harvard Medical School / Brigham and Women's Hospital
Division of Pharmacoepidemiology and Pharmacoeconomics
Subject area: Policy dilemmas in medicine patenting
Supervisors: Aaron Kesselheim, Jerry Avorn

2015 – 2016 **Research Consultant**
Global Challenges Division
World Intellectual Property Organization (WIPO), Geneva
Subject area: Patenting on essential medicines and access
Supervisor: Anatole Krattiger

2013, 2016 **Research Assistant**
Common Law, Faculty of Law, University of Ottawa
Subject area: Pharmaceutical policy
Supervisor: Amir Attaran

2014 – 2015 **Research Assistant**
Epidemiology and Community Medicine, Faculty of Medicine,
University of Ottawa
Subject area: Microsimulation models of North American
cities' education, income, and health inequalities
Supervisor: Michael Wolfson

2012 – 2013 **Research Assistant**
Faculty of Medicine, Epidemiology and Community Medicine,
University of Ottawa
Subject area: Reviews on complex interventions for the
prevention of chronic disease
Supervisor: Julian Little

Professional development

2016 – 2017 **Trainee**, Drug Safety and Effectiveness Cross Disciplinary
Training Program
McMaster University, Hamilton, Ontario
Subject area: Patenting of device/medicine combination
products

2013 **Trainee**, World Health Organization (WHO) Collaborating
Centre for Pharmaceutical Policy and Regulation
Subject area: Pharmaceutical policy analysis,
Pharmacoeconomics

PUBLICATIONS

Refereed research publications

Darrow, J. J., Beall, R.F., & Kesselheim, A. S. (2018). The generic drug industry embraces a faster, cheaper pathway for challenging patents. *Applied Health Economics and Health Policy*.

Beall, R.F., Darrow, J.J., & Kesselheim, A. S. (2018). A Method for Approximating Future Entry of Generic Drugs. *Value in Health*.

Beall, R.F., Darrow, J.J., & Kesselheim, A. S. (2018). Patent term restoration for top-selling drugs in the United States. *Drug Discovery Today*.

Sarpatwari A, Beall R, Abdurrob A, He M, Kesselheim, A (2018). Evaluating The Impact Of The Orphan Drug Act's Seven-Year Market Exclusivity Period. *Health Affairs*, 37(5), 732-737.

Beall, R.F., & Kesselheim, A. S. (2018). Tertiary patenting on device-medicine combinations. *Nature Biotechnology*, 36, 142–145.

Beall, R. F., & Attaran, A. (2017). A method for understanding generic procurement of HIV medicines by developing countries with patent protection. *Social Science and Medicine*, 185, 118–126.

Beall, R.F., Blanchet, R., Attaran, A. (2017). In which developing countries are patents on essential medicines being filed? *Globalization and Health*, 13(1), 38.

Beall, R. F., & Attaran, A. (2016). Which patent and where? Why international patent transparency by companies is needed for medicines. *Nature Biotechnology*, 34(9), 923-926.

Beall, R. F., Nickerson, J. W., Kaplan, W. A., & Attaran, A. (2016). Is patent “evergreening” restricting access to medicine/device combination products? *PLOS ONE*, 11(2), e0148939.

Beall, R. F., Schwalm, J. D. R., Huffman, M. D., McCreedy, T., Yusuf, S., & Attaran, A. (2016). Could patents interfere with the development of a cardiovascular polypill?. *Journal of Translational Medicine*, 14(1), 242.

Kaplan, W. A., & Beall, R. F. (2016). The global intellectual property ecosystem for insulin and its public health implications: an observational study. *Journal of Pharmaceutical Policy and Practice*, 10(1), 3.

Beall, R. F., Kuhn, R., & Attaran, A. (2015). Compulsory licensing often did not produce lower prices for antiretrovirals compared to international procurement. *Health Affairs*, 34(3), 493-501.

Golfam, M., Beall, R., Brehaut, J., Saeed, S., Relton, C., Ashbury, F. D., & Little, J. (2015). Comparing alternative design options for chronic disease prevention interventions. *European Journal of Clinical Investigation*, 45(1), 87-99.

Saeed, S., Golfam, M., Beall, R. F., Ashbury, F. D., Palmer, L. J., & Little, J. (2014). Effectiveness of individual focused interventions to prevent chronic disease. *European Journal of Clinical Investigation*, 44(9), 882-890.

Beall, R. F., Baskerville, N., Golfam, M., Saeed, S., & Little, J. (2014). Modes of delivery in preventive intervention studies: A rapid review. *European Journal of Clinical Investigation*, 44(7), 688-696.

Beall, R. F., Nickerson, J., & Attaran, A. (2014). Pan-Canadian overpricing of medicines: a 6-country study of cost control for generic medicines. *Open Medicine*, 8(4), e130-e135.

Beall, R., & Kuhn, R. (2012). Trends in compulsory licensing of pharmaceuticals since the Doha Declaration: a database analysis. *PLOS Medicine*, 9(1), e1001154.

Book chapters

Wolfson M., & Beall R. F. (2017). On the determinants of health inequalities – Explorations using the Theoretical Health Inequality Model. In: *Growing Inequality: Bridging Complex Systems, Population Health and Health Disparities*. George A. Kaplan, Ana V. Diez Roux, Carl P. Simon, Sandro Galea (eds). Westphalia Press: Washington, DC. goo.gl/sYyXqs

Wolfson, M., Gribble, S., & Beall, R.F. (2016). Exploring Contingent Inequalities – Building the Theoretical Health Inequality Model. In *Agent-based Modelling in Population Studies: Concepts, Methods, and Applications*. André Grow and Jan Van Bavel (eds). Springer Series on Demographic Methods and Population Analysis. (pp. 487-513). Springer International Publishing.

Policy reports

Beall R, Attaran A (2016). (In)accuracy of using US and Canadian patent registers for determining medicines' patent status globally: A call for global patent transparency on essential and lifesaving medicines. *United Nations Secretary-General High-level Panel on Access to Medicines*.

Beall R. F. (2016). A policy brief - Clarifying the debate on IP and access: Patents and the 2013 WHO Model List of Essential Medicines. *World Intellectual Property Organization*, Geneva, 1-4.

Beall R. F., & Attaran A. (2016). Which drugs on the World Health Organization's Model List of Essential Medicines are patented in the developing world and where? A patent landscape study. *World Intellectual Property Organization*, Geneva, 1-64.

Kaplan, W., & Beall, R.F. (2016). Insulin patent profile. *Health Action International*, Amsterdam.

Commentaries & letters

Darrow, J.J., Beall R.F., & Kesselheim, A. S. (2017). Will inter partes review speed US generic drug entry? *Nature Biotechnology*, 35(12):1139-1141.

Houston, A. R., Beall, R. F., & Attaran, A. (2016). Upstream solutions for price-gouging on critical generic medicines. *Journal of Pharmaceutical Policy and Practice*, 9(1), 1.

Attaran, A., Mackey, T., & Beall, R.F. (2016). Lowering the High Cost of Cancer Drugs—III. *Mayo Clinic Proceedings*, 91(3), 399.

Beall, R. F., Attaran, A., & Kuhn, R. (2015). Compulsory Licenses: The Authors Reply. *Health Affairs*, 34(6), 1068-1068.

Attaran, A., & Beall, R. F. (2014). Internet pharmacies: Canada's transnational organized crime. *Health Law in Canada*, 34(4), 93-120.

Kuhn, R., & Beall, R. F. (2012). The time for pharmaceutical compulsory licensing has expired. *Nature Medicine* 18(8), 1168.

Thesis works

Beall, R.F. (2017). *What is the international landscape of essential medicine patent protection and how can developing countries' medicine access be accelerated within it?* Doctoral Thesis. Institute of Population Health, University of Ottawa, Canada.

Beall, R.F. (2010). *Trends in International Compulsory Licensing for Pharmaceuticals since the Institution of the TRIPS Agreement*. Master's Thesis. Josef Korbel School of International Studies, Faculty of Social Sciences, University of Denver, Colorado, United States.

INVITED PRESENTATIONS

Beall R (2018 Apr 12). "Access to medicines, intellectual property, and global development." Oral presentation. Franklin Pierce Center for Intellectual Property, University of New Hampshire School of Law. Concord, United States.

Beall, R. F., & Attaran, A. (2016 Jun 6). "Could patents interfere with the development of a cardiovascular polypill?" Oral presentation (presented by AA). World Heart Federation World Congress of Cardiology & Cardiovascular Health. Mexico City, Mexico.

Beall, R. F. (2016 May 12). "Is patent 'evergreening' restricting access to medicine/device combination products?" Oral presentation. International Health Technology Assessment Annual Meeting 2016. Tokyo, Japan.

Beall, R. F. (2016 May 4). "Population health, access to medicines, & patent transparency." Guest lecture. Program On Regulation, Therapeutics, And Law (PORTAL), Brigham and Women's Hospital / Harvard Medicine School. Boston, United States.

Beall, R. F. (2016 Apr 12). "Global Challenges Seminar on Patents and the WHO Model List of Essential Medicines (18th Edition): Clarifying the Debate on IP and Access." Oral presentation. World Intellectual Property Organization. Geneva, Switzerland.

Beall, R. F. (2016 Apr 10). "Is patent 'evergreening' restricting access to medicine/device combination products?" Poster presentation. CADTH Symposium. Ottawa, Canada.

Beall, R. F. (2016 Mar 9). "(In)accuracy of using US and Canadian patent registers for determining medicines' patent status globally: A call for global patent transparency on essential and lifesaving medicines." Oral testimony. United Nations Secretary-General's High-Level Panel Hearing on Access to Medicines. London, United Kingdom.

Beall, R. F. (2015 Oct 28). "Linking international medicine procurement data and patent data – What do the data say?" Oral panel presentation. Joint Technical Symposium of the WHO, WIPO and WTO. Geneva, Switzerland.

Beall, R. F. (2015 May 12). "Improving Access to Essential Medicines: Understanding the Trade and Patent Landscape." Guest lecture. Global Health Affairs Program, University of Denver. Denver, United States.

Wolfson, M., & Beall, R. F. (2014 May 30). "On the determinants of health inequalities – Explorations using the Theoretical Health Inequality Model (THIM)." Oral presentation. REVES Network on Health Expectancy. Edinburgh, United Kingdom.

Beall, R. F. (2013 Jan 21). "Modes of Delivery in Preventive Intervention Studies: A Rapid Review." Oral presentation. Population Studies Research Network Intervention Workshop: Cancer Care Ontario. Toronto, Canada.

Beall R (2009 Apr 21). "Trends in International Compulsory Licensing for Pharmaceuticals Since the Institution of the Trade Related Aspects of Intellectual Property Protection." Poster presentation. Unite For Sight 6th Annual Global Health Conference at Yale University. New Haven, United States.

Journal editorial boards

2018-current *Medicine Access @ Point of Care*, SAGE Journals

Invited journal peer review

2018 *Research Policy*

2018 *The Journal of World Intellectual Property*

2017 – 2018 *Globalization and Health*

2017	<i>Value in Health</i>
2014 – 2016	<i>Social Science and Medicine</i>
2016	<i>BMC Public Health</i>
2016	<i>Global Public Health</i>

EXTERNAL (POST-)GRADUATE RESEARCH FUNDING AWARDS

2017	<p>Elevate Postdoctoral Research Award (declined) <i>Value:</i> \$110,000 <i>Funder:</i> Mitacs <i>Submission title:</i> Operationalizing Ethical, Legal, and Social Implications Evaluations in Health Technology Assessment to Maximize Health and Health Equity <i>Sponsors:</i> University of Toronto & the Canadian Agency for Drugs and Technologies in Health (CADTH)</p>
2016 – 2017	<p>Drug Safety and Effectiveness Cross Disciplinary Training (DSECT) Graduate or Postdoctoral Research Stipend <i>Value:</i> \$10,000 <i>Funder:</i> Canadian Institutes of Health Research <i>Submission title:</i> Evergreening patents on device-medicine combination products <i>Sponsors:</i> McMaster University & University of Ottawa</p>
2014 – 2016	<p>Vanier Doctoral Canada Graduate Scholarship <i>Value:</i> \$150,000 <i>Funder:</i> Canadian Institutes of Health Research <i>Submission title:</i> Pharmaceutical Innovation, Drug Access, and International Trade Policy in an Era of Global Population Aging <i>Sponsor:</i> University of Ottawa</p>
2013	<p>Ontario Graduate Scholarship <i>Value:</i> \$15,000 <i>Funder:</i> Province of Ontario <i>Submission title:</i> Pharmaceutical Patents and Medicine Access during in an Era of Global Trade and Population Aging <i>Sponsor:</i> University of Ottawa</p>

OTHER ACADEMIC HONORS AND AWARDS

Postdoctoral

2017 – 2018 Executive member, Brigham and Women’s Hospital
Postdoctoral Association

Doctoral

2016 Nominated by dissertation committee for a prize for best thesis
2013 – 2016 Excellence Scholarship, University of Ottawa
2012 – 2016 Executive Board Member, Population Health Graduate
Students Association, University of Ottawa
2016 Conference Grant, Faculty of Graduate and Postgraduate
Studies, University of Ottawa
2016 Conference Grant, Population Health Program, Faculty of
Health Sciences, University of Ottawa
2015 Conference Grant, Universities Allied for Essential Medicines
2014 – 2015 Global Health Practicum Grant, Population Health Program,
University of Ottawa
2013 Field Research Grant, Faculty of Graduate and Postgraduate
Studies, University of Ottawa
2013 Trudeau Scholarship Nominee, University of Ottawa
2012 Admissions Scholarship recipient, University of Ottawa

Masters

2010 Best thesis distinction in Global Health Affairs, University of
Denver
2010 Golden Key Honors Society Nomination

Undergraduate

2004 Graduated with distinction
2003 – 2004 Phi Beta Kappa Honors Society
2003 – 2004 Phi Sigma Tau Honors Society for Philosophy
2001 – 2004 Theta Alpha Kappa, National Honors Society for Religious
Studies
2001 – 2004 Dean’s List, University of Colorado
2001 – 2004 National Society for Collegiate Scholars
1999 – 2004 National Dean’s List
2002 – 2003 Max Kade Foundation Scholarship for International Exchange
(academic year exchange: Universitaet Regensburg, Germany)
2002 – 2003 Richard N. Brown Scholarship

2002 – 2003	Katherine Jacob Lamont Scholarship for Religious Studies
2001 – 2002	Foundation of Educational Advancement Scholarship
2001 – 2002	Colorado Merit (Cche-ofa) Scholarship
2000 – 2001	Colorado Community College Scholar Scholarship

TEACHING AND ADVISING

Teaching interests

Population health / social determinants of health; Population health interventions; Health policy; Social epidemiology and health inequalities; Interdisciplinary research; Mixed methods research design; Health Technology Assessment; Health Impact Assessment

Teaching experience

2014 – 2015	Teaching Assistant , Epidemiology and Community Medicine, Faculty of Medicine, University of Ottawa <i>Course title:</i> Theoretical social epidemiology (POP8950) <i>Supervisor:</i> Michael Wolfson, Canada Research Chair in Population Health Modelling/Populomics
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Academic advising and administration experience

2011 – 2013	Assistant Director , Office of International Education, University of Denver (internal promotion)
2009 – 2011	Program Coordinator , Study Abroad Programs, University of Denver (internal promotion)
2005 – 2009	Study Abroad Advisor , Study Abroad Programs, University of Denver
2003 – 2004	Study Abroad Peer Advisor , Study Abroad Programs, University of Colorado at Boulder

OTHER PROFESSIONAL EXPERIENCE IN HEALTHCARE

2004 – 2005	Employment Consultant , Progressive Job Solutions, Carmel Living Community Centers, Boulder, Colorado <ul style="list-style-type: none"> Assisted developmentally disabled adults find and maintain community employment
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2001 – 2002

Certified Nurse Assistant (CNA), Fraiser Meadows
Healthcare, Boulder, Colorado

- Provided care for 20-30 Alzheimer's patients with the activities of daily living under the supervisor of nursing staff

1999 – 2000

Certified Nurse Assistant (CNA), Boulder Manor Long Term
Care, Boulder, Colorado

- Same responsibilities as above