OLIVIER J. WOUTERS, Ph.D.

London School of Economics • Cowdray House 2.06 • London WC2A 2AE o.j.wouters@lse.ac.uk • +44 207 852 3570

EMPLOYMENT	
2019-	Assistant Professor of Health Policy Director, M.Sc. Global Health Policy Department of Health Policy London School of Economics and Political Science
2018-2019	Fellow in Health Economics Department of Health Policy London School of Economics and Political Science
2012-2018	Research Associate Department of Health Policy & LSE Health London School of Economics and Political Science
EDUCATION	
2018	Ph.D., Health Policy and Economics London School of Economics and Political Science
2012	M.Sc., International Health Policy (Health Economics), with distinction London School of Economics and Political Science
2011	B.Sc., Science, Technology & International Affairs, with honors (cum laude) Edmund A. Walsh School of Foreign Service, Georgetown University
VISITING PO	SITIONS
2019-20	Affiliated Faculty Member, Leuven Institute for Healthcare Policy, KU Leuven, Belgium
2015-18	Visiting Research Fellow, Health Economics Unit, University of Cape Town, South Africa
AWARDS	
2013	Young Forum Gastein Scholar
2012	Brian Abel-Smith Prize, highest marks in the M.Sc. in International Health Policy (Health Economics), London School of Economics and Political Science

GRANTS

2023	Co-principal investigator, grant from the Commonwealth Fund to study US drug pricing reforms (\$148,656)
2021	Principal investigator, internal grant from the LSE Research Support Fund to conduct global study of drug prices, affordability, and availability (£20,000)

SHORT-TERM CONSULTANCIES

2023	World Health Organization Regional Office for Europe
2019	African Development Bank
2013-17	World Bank
2014	World Health Organization
2014	Organization for Economic Co-operation and Development
2013	Ministry of Health of Greece
2011	Research Triangle Institute International

PUBLICATIONS

PEER-REVIEWED ARTICLES

- Vokinger KN, Perényi G, **Wouters OJ** (2023). "Investments in research and development for supplemental drug indications: Implications for drug price negotiations." *JAMA Health Forum* (in press).
- Angelis A, Polyakov R, **Wouters OJ**, Torreele E, McKee M (2023). "High drug prices are not justified by industry's spending on research and development." BMJ, 380: e071710.
- Feldman WB, Tu SS, Alhiary R, Kesselheim AS, **Wouters OJ** (2023). "Manufacturer revenue on inhalers after expiration of primary patents, 2000-2021." JAMA, 329(1): 87-89.
 - Media coverage from STAT News and Washington Post
- Anderson M, Wouters OJ, Mossialos E (2023). "Transferable exclusivity extensions to stimulate antibiotic research and development: what is at stake?" The Lancet Microbe, 4(3): e127-e128.
- van Kessel R, Forman R, Milstein R, Mastylak A, Czabanowska K, Czypionka T, Durand-Zaleski I, Hirche A, Krysinska-Pisarek M, Maynou L, Roberts B, Torbica A, Vrangbæk K, Wang Y, Wouters OJ, Mossialos E (2023). "Divergent COVID-19 vaccine policies: policy mapping of ten European countries." Vaccine, 41(17): 2804-2810.

- Wouters OJ, Forman R, Anderson M, Mossialos E, McKee M (2023). "The launch of the EU Health Emergency Preparedness and Response Authority (HERA): improving global pandemic preparedness?" Health Policy, 133: 104844.
- McKee M, **Wouters OJ** (2023). <u>"The challenges of regulating artificial intelligence in healthcare."</u> *International Journal of Health Policy and Management*, 12: 7261.
- Wouters OJ, Feldman WB, Tu SS (2022). "Product hopping in the drug industry lessons from albuterol." New England Journal of Medicine, 387(13): 1153-1156.
- Wouters OJ, Berenbrok LA, He M, Li Y, Hernandez I (2022). "Association of research and development investments with treatment costs for new drugs approved from 2009 to 2018." JAMA Network Open, 5(9): e2218623.
- Wouters OJ, Shadlen KC, Salcher-Konrad M, Pollard AJ, Larson HJ, Teerawattananon Y, Jit M (2021). "Challenges in ensuring global access to COVID-19 vaccines: Production, affordability, allocation, and deployment." The Lancet, 397(10278): 1023-1034.
 - Accompanied by editorial from The Lancet Editorial Board
 - International media coverage from Agence France-Presse, BBC, Bloomberg, CNN, Der Spiegel, The Guardian, The Huffington Post, O Globo, The New York Times, and Sky News
- Jit M, Ananthakrishnan A, McKee M, Wouters OJ, Beutels P, Teerawattananon Y (2021). "Multi-country collaboration in responding to global infectious disease threats: Lessons for Europe from the COVID-19 pandemic." The Lancet Regional Health Europe, 9: 100221.
- Wenham C, **Wouters O**, Jones C, Juma PA, Mijumbi-Deve RM, Sobngwi-Tambekou JL, Parkhurst J (2021). "Measuring health science research and development in Africa: Mapping the available data." Health Research Policy and Systems, 19: 142.
- Wouters OJ (2020). "Lobbying expenditures and campaign contributions by the pharmaceutical and health-product industry in the United States, 1999-2018." JAMA Internal Medicine, 180(5): 688-697.
 - Accompanied by <u>editorial</u> from Robert Steinbrook (Editor at Large, JAMA Internal Medicine)
 - Cited by Senator Bernie Sanders (I-VT) in an <u>op-ed</u> in The Guardian
 - Media coverage from Forbes, The New York Times and STAT News
- Wouters OJ, McKee M, Luyten J (2020). "Estimated research and development investment needed to bring a new medicine to market, 2009-2018." JAMA, 323(9): 844-853. Reply: JAMA, 2020; 324(5): 518. Correction: JAMA, 2022; 328(11): 1111.
 - Accompanied by three editorials from <u>Gregory Curfman</u> (Deputy Editor, *JAMA*), <u>David Cutler</u> (Professor, Harvard University), and <u>Kenneth Frazier</u> (former CEO, Merck & Co.)
 - Media coverage from BBC, New York Times, STAT News, and Washington Post

- Shi W, Wouters OJ, Liu G, Mossialos E, Yang X (2020). "Association between provincial income levels and drug prices in China over the period 2010-2017." Social Science & Medicine, 263: 1-10.
- Wouters OJ, Sandberg DM, Pillay A, Kanavos PG (2019). "The impact of pharmaceutical tendering on prices and market concentration in South Africa over a 14-year period." Social Science & Medicine, 220: 362-370.
- Wouters OJ, Kanavos PG, McKee M (2017). "Comparing generic drug markets in Europe and the United States: Prices, volumes, and spending." The Milbank Quarterly, 95(3): 554-601.
 - Most read peer-reviewed study of 2017 in The Milbank Quarterly
- Naci H, Wouters OJ, Gupta R, Ioannidis JPA (2017). "<u>Timing and characteristics of cumulative evidence available on novel therapeutic agents receiving Food and Drug Administration accelerated approval."</u> The Milbank Quarterly, 95(2): 261-290.
- **Wouters OJ**, Kanavos PG (2017). "A comparison of generic drug prices in seven European countries: A methodological analysis." BMC Health Services Research, 17(242): 1-7.
- Wouters OJ, Cylus J, Yang W, Thomson S, McKee M (2016). "Medical savings accounts:

 <u>Assessing their impact on efficiency, equity, and financial protection in health care."</u> Health Economics, Policy & Law, 11(3): 321-335.
- Naci H, Lehman R, **Wouters OJ**, Goldacre B, Yudkin J (2015). "Rethinking the appraisal and approval of drugs for type 2 diabetes mellitus." *BMJ*, 351: h5260.
- Wouters OJ, Kanavos PG (2015). "Transitioning to a national health system in Cyprus: A stakeholder analysis of pharmaceutical policy reform." Bulletin of the World Health Organization, 93(9): 606-613.
- Wouters OJ, O'Donoghue DJ, Ritchie J, Kanavos PG, Narva AS (2015). "Early chronic kidney disease: Diagnosis, management, and models of care." Nature Reviews Nephrology, 11(8): 491-502.
- Wouters OJ, Naci H, Samani NJ (2015). "QALYs in cost-effectiveness analysis: An overview for cardiologists." *Heart*, 101(23): 1868-1873.
- Chambers JD, Naci H, **Wouters OJ**, Pyo J, Gunjal S, Kennedy IR, Hoey MG, Winn A, Neumann PJ (2015). "An assessment of the methodological quality of published network metanalyses: A systematic review." PLOS ONE, 10(4): e0121715. Correction: PLOS ONE, 2015; 10(7): e0131953.
- Wouters OJ, Downs PW, Zoerhoff KL, Crowley KR, Frawley H, Einberg J, Chu BK, Brady MA, Oscar R, Jeudi M, Desormeaux A-M, Coly K, Direny AN, Thakur GD, Pokharel RK, Sharma S, Raman DP, Sesay S, Sonnie M, Kilembe B, Mwingira U, Yajima A (2014).

"Resource planning for neglected tropical disease (NTD) control programs: Feasibility study of the Tool for Integrated Planning and Costing (TIPAC)." PLOS Neglected Tropical Diseases, 8(2): e2619.

BOOK CHAPTERS, REPORTS & INVITED PAPERS

- Jones CM, Ankotche A, Canner E, Habboubi F, Hadis M, Hedquist A, Juma PA, Kebadiretse D, Masupe T, Mijumbi R, Mutombo N, Rakotobe AA, Sobngwi-Tambekou J, Welwean A, Wouters O, Wenham C, Parkhurst J (2021). "Strengthening national health research systems in Africa: lessons and insights from across the continent." London: LSE Health. https://doi.org/10.6084/m9.figshare.14039807
- Van Schalkwyk MCI, Jarman H, Hervey T, **Wouters OJ**, Barlow P, McKee M (2020). "Risks to health and the NHS in the post-Brexit era." BMJ, 369: m2307.
- Wouters OJ, Hervey T, McKee M (2020). "Brexit and the European Medicines Agency—What next for the agency and UK drug regulators?." JAMA Health Forum, 1(2): e200135.
- Luyten J, McKee M, **Wouters OJ** (2020). "How much does it cost to research and develop a new medicine?" [in Dutch]. Nederlands Tijdschrift voor Geneeskunde.
- Wouters OJ (2018). "Essays on prices, volumes, and policies in generic drug markets in high- and middle-income countries." Ph.D. thesis, Department of Social Policy, London School of Economics and Political Science, 275 p.
- Wouters OJ, McKee M (2017). "Private financing of health care in times of economic crisis: A review of the evidence." Global Policy, 8(s2): 23-29.
- Kanavos PG, Wouters OJ (2017). "Health care after the Great Recession: Financing options for sustainable and high-quality health systems." Global Policy, 8(s2): 5-6.
- Laviolette L, Gopalan S, Elder LK, **Wouters OJ** (2016). "Incentivizing nutrition: Incentive mechanisms to accelerate improved nutrition outcomes." The World Bank, Washington, DC, 76 p.
- Laviolette L, Gopalan S, Elder LK, **Wouters OJ** (2016). "Incentivizing nutrition: How to apply incentive mechanisms to accelerate improved nutrition outcomes (A practitioner's compendium)." The World Bank, Washington, DC, 56 p.
- Pantelli D, Arickx F, Cleemput I, Dedet G, Eckhardt H, Fogarty E, Gerkens S, Henschke C, Hislop J, Jommi C, Kaitelidou D, Kawalec P, Keskimäki I, Kroneman M, Lopez Bastida J, Pita Barros P, Ramsberg J, Schneider P, Spillane S, Vogler S, Vuorenkoski L, Wallach Kildemoes H, **Wouters O**, Busse R (2016). "Pharmaceutical regulation in 15 European countries: Review." Health Systems in Transition, 18(5): 1-118.

- Cylus J, Wouters OJ, Kanavos P (2015). "Chapter 9. Understanding the role of governance in the pharmaceutical sector: From laboratory to patient." In: Greer S, Wismar M, Figueras J (eds.) Strengthening Health System Governance: Better Policies, Stronger Performance. European Observatory on Health Systems and Policies. Open University Press: Maidenhead, UK. pp. 175-187.
- Kanavos P, Wouters OJ (2014). "Pharmaceutical policies in Cyprus: A review of the current system and future options." Ministry of Health, Nicosia, Republic of Cyprus. 64 p.
- Kanavos P, **Wouters OJ** (2014). "Pharmaceutical parallel trade: Legal, policy, and economic issues." In: Culyer AJ (ed.), Encyclopedia of Health Economics, Vol. 3, pp. 20-28. Oxford: Elsevier.
- Kanavos P, **Wouters OJ** (2014). "Competition issues in the distribution of pharmaceuticals" [in <u>English</u> and <u>French</u>]. Directorate for Financial and Enterprise Affairs, Organisation for Economic Co-operation and Development. Policy brief for the *OECD Global Forum on Competition*: Paris, France. 9 p.

SELECTED PRESENTATIONS

- Hernandez I, Berenbrok L, He M, Li Y, **Wouters OJ** (2022). "Association of research and development investments with treatment costs for new drugs approved from 2009 to 2018." Poster presentation, Academy Health Annual Research Meeting, 5 June 2022. Washington, DC, USA.
- **Wouters OJ** (2021). "Challenges in ensuring global access to COVID-19 vaccines." Invited speaker, Blavatnik School of Government, University of Oxford, 12 May 2021. Oxford, UK.
- **Wouters OJ** (2021). "Challenges in ensuring global access to COVID-19 vaccines." Invited speaker, British Medical Association, 5 May 2021. London, UK.
- Wouters OJ (2021). "How to make COVID-19 vaccination a success? Policy priorities and implementation from Israel and around the world." Invited panelist, LSE Institute of Global Affairs, 26 Jan. 2021. London, UK.
- **Wouters OJ** (2019). "What is the price impact of tendering for medicines by therapeutic class? A difference-in-differences estimation." Speaker (conference paper). Health Economists' Study Group Summer Meeting, 5 July 2019. University of East Anglia, Norwich, UK.
- **Wouters OJ**, Wenham C, Parkhurst J (2019). "Health sciences research in Africa: An empirical analysis." Invited speaker and panelist, DELTAS Africa Scientific Conference, 17 July 2019. Dakar, Senegal.
- Wouters OJ (2018). "Analyzing the impact of changes to pharmaceutical policies on medicine prices and demand in South Africa." Invited participant, Peking University, UK-China Workshop on the Economic Analysis of Large Medical Databases, 31 Aug. 2018. Beijing, China.

- **Wouters OJ** (2016). "Incentive mechanisms for nutrition: What does the evidence tell us?" Invited speaker, The World Bank, Workshop on Incentivizing Nutrition, 4 May 2016. Washington, DC, USA.
- **Wouters OJ**, Kanavos PG (2015). "Transitioning to a national health system in the Republic of Cyprus: A stakeholder analysis of pharmaceutical policy reform." Speaker, 3rd International Pharmaceutical Pricing and Reimbursement Information Conference. 13 Oct. 2015. Vienna, Austria.

SELECTED MEDIA COVERAGE & NEWS

- TV interviews in February, March, and April 2021 about our study in <u>The Lancet</u> with BBC Business News, <u>BBC World News</u>, Canadian Broadcasting Corporation, Scottish Television, <u>Sky News</u>, and ZDF (German public broadcaster).
- Radio interviews in February 2021 about our study in *The Lancet* with BBC 5 Live Breakfast, BBC Newshour, BBC World Service, LBC, and Times Radio.
- Politico. <u>"The real reason Europe's medicines industry is dying"</u>, 25 April 2023 (Research referenced and quoted).
- STAT News. "Here's why there aren't many cheap, generic versions of pricey inhalers", 16 March 2023 (Research referenced).
- STAT News. "Medicare will take R&D costs, effectiveness into account when it negotiates drug prices. But studies show that doesn't affect prices", 10 March 2023 (Research referenced and quoted).
- The FT. "Drugmakers demand big cut in Britain's medicines levy", 27 February 2023 (Quoted).
- TIME Magazine. "Big pharma's patent abuses are fueling the drug pricing crisis", 24 February 2023 (Research referenced).
- The BMJ. "Licensing deal for cancer drug will increase access in low and middle income countries", 21 October 2022 (Quoted).
- WIRED. "Big pharma says drug prices reflect R&D costs. Researchers call BS", 13 October 2022 (Research referenced and quoted).
- The New York Times. <u>"The long, long wait for a diabetes cure"</u>, 9 August 2022 (Research referenced).
- The Washington Post. "Drug companies are warning that pricing reform spells doom. Don't fall for it", 8 August 2022 (Research referenced).
- The FT. "Nations urged to waive vaccine patents while drugmakers say rules are fair", 16 June 2022 (Quoted).

- The Lancet Infectious Diseases. "Booster shots for COVID-19—the debate continues", 1 October 2021 (Quoted).
- Bloomberg News. "When lifesaving vaccines become profit machines for drugmakers", 6 July 2021 (Research referenced).
- The Lancet Infectious Diseases. "Global COVID-19 vaccine inequity", 1 July 2021 (Quoted).
- BBC Radio 4. "Marvellous medicines", 14 June 2021 (research referenced in this broadcast about drug discovery and development).
- The FT. "Biogen's \$56,000-a-year Alzheimer's drug reignites US debate over costs", 8 June 2021 (Quoted).
- The Lancet Respiratory Medicine. "Ensuring fair distribution of COVID-19 vaccines: is an intellectual waiver the answer?", 21 May 2021 (Quoted).
- Forbes. "Why is healthcare so expensive? Blame the lobbyists", 9 April 2021 (Research referenced).
- The New York Times. "India cuts back on vaccine exports as infections surge at home", 25 March 2021 (Research referenced and quoted).
- The Lancet Respiratory Medicine. "Challenges in the rollout of COVID-19 vaccines worldwide", 5 March 2021 (Research referenced and quoted).
- Der Spiegel. <u>"There would be enough for everyone—If rich countries would share"</u> (in German), 26 February 2021 (Research referenced).
- BBC. "Covid-19 pandemic: Warning vaccine roll-out risks prolonging crisis", 13 February 2021 (Research referenced and quoted).
- Sky News. "COVID-19: Vaccine nationalism, high prices and supply chain issues slowing worldwide coronavirus inoculation, say scientists", 13 February 2021 (Research referenced and quoted).
- The Guardian. "No end to Covid pandemic without equal access to vaccine, experts say", 13 February 2021 (Research referenced and quoted).
- The New York Times. "Want Vaccines Fast? Suspend Intellectual Property Rights", 7 December 2020 (Research referenced).
- Science. "Scientists fear no-deal Brexit as deadline looms", 1 December 2020 (Quoted).
- STAT News. "First-of-its-kind examination shows how widely pharma showers campaign cash at the state level", 15 October 2020 (Research referenced).
- STAT News. "Pharma is showering Congress with cash, even as drug makers race to fight the coronavirus", 10 August 2020 (Research referenced and quoted).

The New York Times. "Indian billionaires bet big on head start in coronavirus vaccine race", 1 August 2020 (Quoted).

Foreign Affairs. "Drugs and vaccines are coming—But to whom?", 19 May 2020 (Research referenced).

Kaiser Health News. "Senators who led pharma-friendly patent reform also prime targets for pharma cash", 24 March 2020 (Research referenced).

Nature Reviews Drug Discovery. "\$1.3 billion per drug?", 11 March 2020 (Research referenced).

STAT News. "New estimate says developing a drug costs \$1.3 billion, which is a lot, but less than companies often say", 3 March 2020 (Research referenced and quoted).

Dr Scott Gottlieb, Commissioner of the US Food and Drug Administration, "Advancing Patient Care Through Competition", Remarks to the Pharmaceutical Care Management Association, Washington, DC, 9 April 2018 (Research referenced by Dr. Gottlieb in his speech).

Bloomberg News. "When Cancer Treatments Fail, Italy Wants Money Back", 15 Jan. 2016 (Quoted).

TEACHING

Course Convenor (London School of Economics)

Global Access to Medicines (2022) Pharmaceutical Economics and Policy (2022)

Seminar Leader (London School of Economics)

Applied Regression Analysis (2016)

Computing Packages for Applied Analysis: Stata (2016-17)

Economic Analysis for Health Policy in Low- and Middle-Income Countries (2019-20)

Health and Social Care Policy (2014)

Health Care Economic Evaluation (2018-19)

Intermediate Quantitative Analysis (2015-16)

Introduction to Quantitative Analysis (2014, 2016)

Pharmaceutical Economics and Policy (2019-21)

Principles of Health Technology Assessment (2020-21)

Guest Lectures

Colgate University (2022, graduate course)

King's College London (2020, undergraduate course)

University of California, San Diego (2022-23, graduate course)

University College London (2020, graduate course)

University of Oxford (2021, graduate course)

University of Washington (2023, graduate course)

Teaching Qualifications and Awards

Excellence in Education Award, London School of Economics (2021) Postgraduate Certificate in Higher Education, London School of Economics (2020)

PhD Supervision

Avi Cherla (2021-present, secondary supervisor) Kristina Jenei (2022-present, secondary supervisor) Lars Van Cutsem (2023, visiting PhD student, KU Leuven, Belgium)

International Advisory Roles

Member, International Advisory Board, MSc Global Health, KU Leuven, Belgium (2023-present)

LANGUAGE & IT SKILLS

Languages: English (native), French (intermediate), and Swedish (native)

Computer Languages and Software: LaTeX, NVivo, Python (basic), R (basic), Stata, and TreeAge

PROFESSIONAL SERVICE

Letters of Recognition

Top-graded peer reviewer, Annals of Internal Medicine (2016-18, 2020)

Editorial Positions

Guest Academic Editor, PLOS ONE (2020-21) Guest Editor (with Panos G. Kanavos), Global Policy (2017)

Ad Hoc Peer Reviewer (Journals)

Annals of Internal Medicine

BMC Health Services Research

BMI

BMJ Global Health

BMJ Open

Bulletin of the World Health Organization

Clinical Trials

Cost Effectiveness and Resource Allocation

EClinicalMedicine

European Journal of Health Economics

Expert Review of Anti-Infective Therapy

Expert Review of Pharmacoeconomics & Outcomes Research

Family Medicine and Community Health

Globalization and Health

Health Economics

Health Policy

Health Policy and Planning

Health Policy and Technology

Inquiry

International Journal of Clinical Practice

International Journal of Health Policy and Management

International Journal of Health Services

JAMA

JAMA Health Forum

JAMA Internal Medicine

JAMA Network Open

Journal of Acquired Immune Deficiency Syndromes

Journal of Development Studies

Journal of Globalization and Development

Journal of the Royal Society of Medicine

The Lancet

The Lancet Public Health

The Lancet Regional Health Europe

The Lancet Regional Health Western Pacific

The Milbank Quarterly

Nephrology

Open Heart

PLOS Medicine

PLOS ONE

PNAS Nexus

Saudi Pharmaceutical Journal

Social Science & Medicine

Vaccine

Value in Health

Value in Health Regional Issues

World Medical & Health Policy

Professional Membership

Health Economists' Study Group

Higher Education Academy (Fellow)

International Society for Pharmacoeconomics and Outcomes Research

LAST UPDATED: July 2023