Devin Incerti

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Education

2015 Ph.D. Public Policy (Political Economy), Princeton University

2013 M.A. Public Affairs, Princeton University

2009 B.A. Mathematics and Economics, University of California, San Diego

2009 B.A. Political Science, University of California, San Diego

Employment

2019- Senior Research Economist, Precision Health Economics, Oakland, CA

2017- Lead Economist - Open-Source Value Project, Innovation and Value Initiative, Oakland, CA

2017-19 Research Economist, Precision Health Economics, Oakland, CA

2016-17 Associate Research Economist, Precision Health Economics, Oakland, CA

2015-16 Research Economist Intern, Precision Health Economics, Oakland, CA

2009-10 Research Associate, NERA Economic Consulting, Los Angeles, CA

Publications

Incerti D, Thom H, Baio G, Jansen JP. R you still using Excel? The advantages of modern software tools for health technology assessment. *Value in Health* (in press).

Incerti D, Curtis JR, Shafrin J, Lakdawalla DN, Jansen JP. A flexible open-source decision model for value assessment of biologic treatment for rheumatoid arthritis. *Pharmacoeconomics* (in press).

Incerti D, Browne J, Huber C, Baker CL, Makinson G, Goren A, Wilke R, Stevens W. An empirical tool for estimating and categorizing unmet need. *BMC Health Services Research* (in press).

Ton TG, Bennett M, **Incerti D**, Peneva D, Druzin M, Stevens W, Butwick A, Lee HC. Maternal and infant adverse outcomes associated with preeclampsia with and without severe features in the United States. *American Journal of Perinatology* (in press).

Incerti, D. The Optimal Allocation of Campaign Funds in U.S. House Elections. *Electoral Studies*. 2018 Dec 1;56:102-13. https://doi.org/10.1016/j.electstud.2018.09.010 (PDF, Supplement, GitHub).

Incerti D, Summers N, Ton TG, Boscoe A, Chandraker A, Stevens W. The Lifetime Health Burden of Delayed Graft Function in Kidney Transplant Recipients in the United States. *Medical Decision*

Making Policy & Practice. 2018. Jun;3(1):2381468318781811. http://journals.sagepub.com/doi/full/10.1177/2381468318781811.

Frasco MA, Shih T, **Incerti D**, Diaz Espinosa O, Vania DK, Thomas N. Incremental net monetary benefit of ocrelizumab relative to subcutaneous interferon β-1α. *Journal of Medical Economics*. 2017 Oct 3;20(10):1074-82. http://dx.doi.org/10.1080/13696998.2017.1357564.

Stevens W, Shih T, **Incerti D**, Ton TG, Lee H, Peneva D, Macones GA, Sibai BM, Jena AB. 2017. Short-term costs of preeclampsia to the United States health care system. *American Journal of Obsetrics & Gynecology*. 2017 Sep 1;217(3):237-48. http://dx.doi.org/10.1016/j.ajog.2017.04.032.

Shahabi A, Peneva D, **Incerti D**, McLaurin K, Stevens W. Assessing Variation in the Cost of Palivizumab for Respiratory Syncytial Virus Prevention in Preterm Infants. *PharmacoEconomics-Open*. 2017:1-9. https://doi.org/10.1007/s41669-017-0042-3.

Jansen JP, **Incerti D**, Mutebi A, Peneva, D, MacEwan JP, Stolshek B, Kaur P, Gharaibeh M, Strand V. Cost-effectiveness of sequenced treatment of rheumatoid arthritis with targeted immune modulators. *Journal of Medical Economics*. 2017 Jul 3;20(7):703-14. http://dx.doi.org/10.1080/13696998.2017.1307205 (Supplement).

Manuscripts Under Review

Stevens W, **Incerti D**, Peneva D, Shrestha A, Ramaswamy K, Smith G. An Empirical Analysis of the Role of Learning by Doing in Dynamic Cost-effectiveness.

Jansen JP, **Incerti D**, Curtis, JR. Towards relevant and credible cost-effectiveness analysis for value assessment in the decentralized US healthcare system.

Working Papers

Incerti D, Incerti T. Are regime changes always bad economics? Evidence from daily financial data. (PDF, GitHub).

Incerti D. An Assessment of Long-term Healthcare Expenditure Risk Using a Dynamic Bayesian Model. (PDF, Fake-data simulation).

Incerti D. Racial, Ethnic and Educational Disparities in Pharmaceutical Expenditures. (PDF).

Blogs

Contributor to R-bloggers. (Link to posts).

Jansen JP, **Incerti D**, Linthicum M. An Open-Source Consensus-Based Approach To Value Assessment. Health Affairs Blog. 2017 Dec 1.

Oral Presentations

R You Seriously Still Using Excel? The Many Advantages of Open Source Decision Modeling in Efficient Programming Languages. ISPOR Annual European Congress, Barcelona, Spain, 2018

(with Jeroen Jansen, Howard Thom, and Gianluca Baio). (PDF)

Developing flexible, iterative, and transparent decision models: a detailed look at a rheumatoid arthritis individual patient simulation. ISPOR Student Network Educational Webinar, 2018. (PDF)

Open-Source Consensus-Based Models to Improve the Cost-Effectiveness of Rheumatology Care (selected oral abstract). ACR/ARHP Annual Meeting, San Diego, 2017.

Estimates of the costs of preeclampsia to the United States health care system. March of Dimes Prematurity Research Center at Stanford University, Palo Alto, 2016 (with Thanh G.N. Ton).

Abstracts and Poster Presentations

Incerti D, Jansen JP. Open-source software for developing computationally efficient cost-effectiveness models to evaluate sequential treatment strategies in oncology. ISPOR Annual European Congress, Barcelona, Spain, 2018.

Jansen JP, **Incerti D**, Shafrin J, Frederickson A, Lakdawalla DN, Reckamp KL. A flexible open-source cost-effectiveness model for metastatic EGFR+ non-small cell lung cancer. ISPOR Annual European Congress, Barcelona, Spain, 2018.

Incerti D, Shafrin J, Lakdawalla DN, Zhao L, Linthicum M, Jansen JP. Improvement of an open-source cost-effectiveness model based on public feedback. ISPOR Annual European Congress, Barcelona, Spain, 2018.

May SG, Shafrin J, Linthicum M, **Incerti D**, Jansen JP, Bright J. Toward patient-centered value assessment: Lessons from the IVI Open-Source Value Project. ISPOR Annual European Congress, Barcelona, Spain, 2018.

Incerti D, Jansen JP. An Open-Source Toolkit for Developing Flexible Evidence-Based Decision and Simulation Models for Value Assessment in Oncology with R. ISPOR 23rd Annual International Meeting, Baltimore, 2018. https://doi.org/10.1016/j.jval.2018.04.1508.

Incerti D, Jansen JP. Quantifying the Importance of Model Parameters and Structural Assumptions on the Value of Treatments for Rheumatoid Arthritis using Metamodeling. ISPOR 23rd Annual International Meeting, Baltimore, 2018. https://doi.org/10.1016/j.jval.2018.04.1333.

Incerti D, Curtis JR, Lorenzi M, Jansen JP. Exploring Structural Uncertainty With An Open-Source Cost-Effectiveness Model For Rheumatoid Arthritis. ISPOR Annual European Congress, Glasgow, Scotland, 2017. http://dx.doi.org/10.1016/j.jval.2017.08.2098.

Incerti D, Peneva D, Shrestha A, Ramaswamy K, Smith G, Stevens W. An Empirical Analysis of the Role of Learning by Doing in Dynamic Cost-effectiveness. ISPOR Annual European Congress, Glasgow, Scotland, 2017. http://dx.doi.org/10.1016/j.jval.2017.08.215.

Jansen JP, Jeffers A, Chang K, **Incerti D**. An Outcomes Regression Approach for Indirect Comparisons of Survival Outcomes when Standard Network Meta-Analysis is Not Feasible. ISPOR Annual International Meeting, Boston, 2017.

Wan J, Mongan J, **Incerti D**, Courtier J. A Shiny New World: Creating Your Own Radiology Decision Support Webapps Using R. Radiological Society of North America, Annual Meeting, Chicago, 2016.

Shiraito Y, **Incerti**, D, Lopez-Moctezuma G. A Reassessment of the Resource Curse: A Bayesian Dynamic Analysis of Panel Data. Midwest Political Science Association, Annual Meeting, Chicago, 2013.

Software

hesim

Author of `hesim`, an R package for health economic simulation modeling and decision analysis that provides a general framework for integrating statistical analyses with economic evaluation. The package currently supports N-state partitioned survival models and state-transition models, as well as individualized cost-effectiveness analysis. It is designed for high performance simulation modeling including microsimulation and probabilistic sensitivity analysis with core code written in C++ (Website).

IVI-NSCLC model

Author of the IVI-NSCLC model, an open-source simulation model for assessing the value of sequences of treatment to treat patients with epidermal growth factor receptor (EGFR) positive non-small cell lung cancer. Lead programmer of the R package. (GitHub)

- Model documentation: PDF documentation describing the IVI-NSCLC model.
- iviNSCLC R package: an R package for running the IVI-NSCLC model.
- IVI-NSCLC basic interface: a general audience web application allowing those who are not experts in health economics to run the model and learn more about value assessment.
- IVI-NSCLC advanced interface: a web application that allows users full control over the model for performing cost-effectiveness and multi-criteria decision analyses.

IVI-RA model

Author of the IVI-RA model, an open-source individual patient simulation model for assessing the value of disease-modifying anti-rheumatic drugs (DMARDs) to treat rheumatoid arthritis. Lead programmer of the R package and R Shiny web apps. (GitHub)

- Model documentation: PDF documentation describing the IVI-RA model.
- iviRA R package: an R package for running the IVI-RA model.
- IVI-RA Model Interface: an R Shiny web application providing full control over the treatments, the patient population, model parameters, model structures, and time horizon.
- IVI-RA Value Tool: a more streamlined R Shiny web application for users with less experience in decision-analytic modeling and rheumatoid arthritis.

R Shiny web applications

- An R Shiny web application that aids diagnosis of skeletal dysplasias based on clinical features. (Link).
- Interactive plots of parametric survival distributions. (Link).

Honors and Awards

2010-15 *Centennial Fellowship*, Princeton University

2009 *The Award for Excellence in Joint Mathematics-Economics* granted to the most outstanding graduating Senior in Joint Mathematics-Economics, UCSD Department of Economics

2009 *DeWitt Higgs Award* granted to the outstanding graduating Senior in the area of law and public policy, UCSD Department of Political Science

2009 *Michael Addison Award* for the most outstanding Senior research paper, Warren College (graduating class of 950 students)

Skills and Interests

Computing

Most experienced: R, Stata, LaTeX, Excel

Some experience: C++, Python, MySQL, Stan, JAGS

Athletics

UCSD Varsity Baseball Letterman, shortstop and centerfield, 2004 – 2006