

## **Sarah See Stith**

Assistant Professor of Economics

University of New Mexico

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<https://econ.unm.edu/people/Faculty/profile/sarah-stith.html>

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### **RESEARCH & TEACHING INTERESTS**

Applied Microeconomics, Health Economics, and Law and Economics

### **EMPLOYMENT**

Assistant Professor of Economics at the University of New Mexico (2013 - present)

Senior Fellow at the Robert Wood Johnson Foundation Center for Health Policy (2013 - present)

Affiliated Faculty with the Medical Cannabis Research Fund at the University of New Mexico (2016 – present)

Research Fellow with the Center for Financial Security at the University of Wisconsin-Madison (2019 – present)

### **EDUCATION**

Ph.D., University of Michigan – Ann Arbor, 2013

M.B.A., University of Texas – Austin, 2004

B.A., Tulane University – New Orleans, 1999

### **PEER-REVIEWED JOURNAL ARTICLES**

1. Stith, Sarah, J.M. Vigil, F. Brockelman, K. Keeling, and B. Hall. 2019. The Association between Cannabis Product Characteristics and Symptom Relief. *Scientific Reports*, 9: 2712.
2. Doremus, Jacqueline, Sarah Stith, and Jacob Vigil. 2019. Using Recreational Cannabis to Treat Insomnia: Evidence from Over-The-Counter Sleep Aid Sales in Colorado. *Complementary Therapies in Medicine*, 47:102207.
3. Li, X, SS Stith, F Brockelman, K Keeling, B. Hall, and JM Vigil. 2019. The Effectiveness of Self-Directed Medical Cannabis Treatment for Pain. *Complementary Therapies in Medicine*, 46:123-130.
4. Stith, Sarah. 2018. Organizational Learning-by-Doing in Liver Transplantation. *International Journal of Health Economics and Management*, 18(1): 25-45.
5. Stith, Sarah, J.M. Vigil, F. Brockelman, K. Keeling, and B. Hall. 2018. Patient-Reported Symptom Relief Following Medical Cannabis Consumption. *Frontiers in Pharmacology*, 9, 96.
6. Stith, Sarah, Jacob Vigil, Ian Adams, and Anthony Reeve. 2018. Effects of Legal Access to Cannabis on Scheduled II-V Drug Prescriptions. *Journal of the American Medical Directors Association*, 19(1): 59-64.
7. Rasmussen, S., A. Thomas, J. Garonzik-Wang, M. Henderson, S. Stith, D. Segev, L. Hersch Nicholas. 2018. Reported Effects of the SRTR 5-Tier Rating System on US Transplant Centers. *Transplant International*, 31(10).

8. Diviant, J.P., JM Vigil, and SS Stith. 2018. The Role of Cannabis within an Emerging Perspective on Schizophrenia. *Medicines*, 5, 86.
9. Vigil, J.M., S.S. Stith, J.P. Diviant, F. Brockelman, K. Keeling, and B. Hall. 2018. Effectiveness of Raw, Natural Medical Cannabis Flower for Treating Insomnia under Naturalistic Conditions. *Medicines*, 5(3), 75.
10. Vigil, Jacob M., Sarah S. Stith, and Anthony P. Reeve. 2018. Accuracy of Patient Opioid Use Reporting at the Time of Medical Cannabis License Renewal. *Pain Research and Management*, 1, 1-4.
11. Vigil, Jacob, Sarah Stith, Ian Adams, and Anthony Reeve. 2017. Associations between Medical Cannabis and Prescription Opioid Use in Chronic Pain Patients: A Preliminary Cohort Study. *PLOS One*, 11/16/2017
12. Vigil, J. M., Coulombe, P., Rowell, L. N., Strenth, C., Kruger, E., Alcock, J., Venner, K., Stith, S. S., & LaMendola, J. 2017. "The Confounding Effects of Assessor Ethnicity on Subjective Pain Reporting in Women." *The Open Anesthesiology Journal*, 11:1-11.
13. Vigil, Jacob M., Patrick Coulombe, Joseph Alcock, Sarah S. Stith, Eric Kruger and Sara Cichowski. 2017. "How Nurse Gender Influences Patient Priority Assignments in U.S. Emergency Departments." *Pain*, 158(3):377-382.
14. Stith, Sarah, and Richard Hirth. 2016. "The Effects of Healthcare Quality Requirements on Provider Behavior: Evidence from Kidney Transplantation." *Journal of Economics and Management Strategy*, 25(4): 789-825. (feature article)
15. Vigil, Jacob M., Patrick Coulombe, Joseph Alcock, Eric Kruger, Sarah S. Stith, Chance Strenth, M. Parshall and Sara Cichowski. 2016. "Patient Ethnicity Affects Triage Assessments and Prioritization in U.S. Department of Veterans Affairs Emergency Departments." *Medicine*. 95(14):e3191.
16. Lacetera, Nicola, Mario Macis, and Sarah Stith. 2014. "Removing Barriers to Donation: The Effect of Tax and Leave Legislation." *Journal of Health Economics* 33: 43-56.

## **OTHER PUBLICATIONS**

1. Stith, Sarah, Jacob Vigil, Ian Adams, and Anthony Reeve. 2019. "Insurers Save While Patients Pay: The Redistribution of Medication Costs Following Enrollment in a State-Legal Medical Cannabis Program." In Chronic Pain: Prevalence, Management, and Outcomes, Hauppauge, NY: Nova Science.
2. Stith, Sarah S., and Vigil, Jacob M. 2016. "Federal Barriers to Cannabis Research." *Science* (letter). 352(6290): 1182.
3. Stith, Sarah S. and Jacob M. Vigil. 2016. "Does Ultrasociality Really Exist? And Is It the Best Predictor of Human Economic Behaviors." *Behavioral and Brain Sciences* (commentary) 13: e114.

4. Kruger, Eric, Jacob M. Vigil, and Sarah S. Stith. 2016. "Task Specificity and the Impact on Both the Individual and Group during the Formation of Groups." *Behavioral and Brain Sciences* (commentary) 39:e156.
5. Vigil, Jacob M., and Sarah S. Stith. 2016. "Ethnic Disparities in Health Care Continue to Exist in U.S. Veterans Affairs Emergency Departments." In M. Townsend (Ed.), Veterans: Political, Social and Health Issues. Hauppauge, NY: Nova Science.
6. Stith, S., A. Oaris, and F. Barrantes. 2014. "Delisting From the Kidney Transplant Wait-List: Native Americans Are the Most Disadvantaged." Abstract #C1753. *Transplantation* 98:568-569.
7. Barrantes, F, A. Oaris, and S. Stith. 2014. "Consent for Deceased Donation Among Native Americans." Abstract #D2555. *Transplantation* 98:651.

**WORKING PAPERS** (by submission status)

1. "The Efficacy of Minimum Volume Requirements in Healthcare" (with Lauren Nicholas, R&R)
2. "Cannabis and Antacids" (with Jacob Vigil and Jacqueline Doremus, R&R)
3. "The Effectiveness of Cannabis for Treating Depression" (with Jacob Vigil, Xiaoxue Li, Jegason Diviant, Franco Brockelman, Keenan Keeling, and Branden Hall, R&R)
4. "Psychological Effects of Losing Health Insurance" (with Xiaoxue Li, R&R)
5. "The Effectiveness of Cannabis for Treating Migraines" (with Jacob Vigil, Xiaoxue Li, Jegason Diviant, Franco Brockelman, Keenan Keeling, and Branden Hall, R&R)
6. "Backdating to Dialysis: Moral Hazard in Health Care Decision-Making" (with Xiaoxue Li, submitted)
7. "The Effectiveness of Cannabis for Treating Anxiety" (with Jacob Vigil, Xiaoxue Li, Jegason Diviant, Franco Brockelman, Keenan Keeling, and Branden Hall, submitted)
8. "The Effect of Recreational Cannabis Legalization on Labor Market Outcomes in Colorado" (with Jacqueline Doremus and Avinandan Chakraborty)
9. "Native American Access to Transplantation" (with Soumyajit Chakraborty and Fidel Barrantes)
10. "The Effectiveness of Cannabis for Treating Fatigue" (with Jacob Vigil, Jegason Diviant, Franco Brockelman, Keenan Keeling, and Branden Hall)
11. "Labor Market Effects of SNAP-Related Work Requirements" (with Usamah Wasif)

## **WORKS IN PROGRESS**

1. “Cannabis Legalization and Its Marginal Use” (with Jacqueline Doremus, Jacob Vigil, Franco Brockelman, Keenan Keeling, Branden Hall)
2. “The Effect of Increasing Cannabis Access on Product Availability” (with Jacob Vigil, Jacqueline Doremus, Franco Brockelman, Keenan Keeling, and Branden Hall)
3. “Cannabis Legalization and Suicide Risk Among Veterans” (with Jacqueline Doremus)
4. “Cannabis, Veterans, and PTSD” (with Jacob Vigil, Franco Brockelman, Keenan Keeling, and Branden Hall)
5. “The Effect of Cannabis Legalization on Pharmaceutical Stock Market Valuation” (with Jacqueline Doremus and Ziemowit Bednarek)
6. “Pharmacy Benefit Managers Effects on Drug Prices: Evidence from Cannabis Legalization” (with Jacqueline Doremus, Ziemowit Bednarek)
7. “Recreational Cannabis & Labor Demand” (with Jacqueline Doremus and Avinandan Chakraborty)
8. “SNAP-Related Work Requirements & Disability Claiming” (with Usamah Wasif)

## **CONFERENCES** (presenting)

Association for Public Policy Analysis & Management Fall Research Conference, Denver, CO, November 2019, “Cannabis Legalization and the Marginal Medical Use”

8<sup>th</sup> Conference of the American Society of Health Economics, Washington, DC, June 2019, “The Effect of Cannabis Legalization on Competition in Pharmaceutical Markets”

8<sup>th</sup> Conference of the American Society of Health Economists, Washington, DC, June 2019, “The Effect of State-Legal Adult Cannabis Use on the Market for Over-the-Counter Sleep Aids”

7<sup>th</sup> Conference of the American Society of Health Economists, Atlanta, GA, June 2018, “How Do Cannabis Patients Experiment Across Products Using Mobile Device App Data?”

87<sup>th</sup> Southern Economic Association Annual Meetings, Tampa, FL, November 2017, “Tradeoffs between Moral Hazard and Access-to-Care: Evidence from Kidney Transplantation”

National Cannabis Summit, Denver, CO, August 2017, “Effect of Enrollment in the New Mexico Medical Cannabis Program on Prescription Opioid Use in Chronic Pain Patients”

6<sup>th</sup> Biennial Conference of the American Society of Health Economists, Philadelphia, PA, June 2016, “Do Healthcare Quality Requirements Lead to Dynamic Inefficiencies?”

85<sup>th</sup> Southern Economic Association Annual Meetings, New Orleans, LA, November 2015, “Do Healthcare Quality Requirements Lead to Dynamic Inefficiencies?”

90<sup>th</sup> Western Economic Association International Annual Conference, Honolulu, HI, July 2015, “The Effects of Quality Standards on Healthcare Provider Behavior: Evidence from Kidney Transplantation”

11<sup>th</sup> World Congress in Health Economics, Milan, Italy, July 2015, “Are Minimum Volume Requirements Effective? Evidence from Organ Transplantation”

11<sup>th</sup> World Congress in Health Economics, Milan, Italy, July 2015, “The Effects of Quality Standards on Healthcare Provider Behavior: Evidence from Kidney Transplantation”

Association for Public Policy Analysis & Management Fall Research Conference, Albuquerque, NM, November 2014, “The Efficacy of Minimum Volume Requirements”

5<sup>th</sup> American Society of Health Economics Biennial Conference, Los Angeles, June 2014, “The Effects of Healthcare Quality Requirements”

5<sup>th</sup> American Society of Health Economics Biennial Conference, Los Angeles, June 2014, “Back-Dating to Dialysis”

Monday Transplant Conference, Section of Transplantation Surgery, University of Michigan Health System, Ann Arbor, MI, October 2012, “Organizational Learning-by-Doing in Healthcare: Evidence from Liver Transplantation”

AcademyHealth 2012 Annual Research Meeting, Orlando, FL, June 2012, “Quality Improvement in Liver Transplantation: Scale and Experience versus Innovation”

10<sup>th</sup> International Industrial Organization Conference, Arlington, VA, March 2012, “When Practice Does Not Make Perfect: Evidence from Liver Transplantation”

8<sup>th</sup> International Industrial Organization Conference, Vancouver, BC, April 2010, “Removing Barriers to Donation: The Effect of Tax and Leave Legislation”

## **DISCUSSANT**

American Public Policy and Management Conference, Denver, CO, November 2019

8<sup>th</sup> Conference of the American Society of Health Economics, Washington, DC, June 2019

7<sup>th</sup> Conference of the American Society of Health Economics, Atlanta, GA, June 2018

6<sup>th</sup> Biennial Conference of the American Society of Health Economists, Philadelphia, PA, June 2016

85<sup>th</sup> Southern Economic Association Annual Meetings, New Orleans, LA, November 2015

90<sup>th</sup> Western Economic Association International Annual Conference, Honolulu, HI, July 2015

11<sup>th</sup> World Congress in Health Economics, Milan, Italy, July 2015

Midwest Health Economics Conference, Champaign, IL, May 2014; Iowa City, April 2015

American Public Policy and Management Conference, Albuquerque, NM, November 2014

5<sup>th</sup> American Society of Health Economists Biennial Conference, Los Angeles, CA, June 2014  
Midwest Health Economics Conference, Champaign-Urbana, IL, April 2014

### **SESSION CHAIR**

American Public Policy and Management Conference, Denver, CO, November 2019  
8<sup>th</sup> Conference of the American Society of Health Economics, Washington, DC, June 2019  
6<sup>th</sup> Biennial Conference of the American Society of Health Economists, Philadelphia, PA, June 2016  
Western Economic Association International Annual Conference, Honolulu, HI, July 2015  
World Congress in Health Economics, Milan, Italy, July 2015  
American Public Policy Association Meeting, Albuquerque, NM, November 2014  
American Society of Health Economics Biennial Conference, Los Angeles, CA, June 2014

### **SESSION ORGANIZER**

American Public Policy and Management Conference, Denver, CO, November 2019, “Is Cannabis a Substitute for Conventional Healthcare?”  
American Society for Health Economics Conference, Washington, DC, June 2019, “Marijuana and Public Policy”

### **CONFERENCE POSTERS**

World Transplant Congress, San Francisco, CA, July 2014, “Access to Transplantation among Native Americans”  
World Transplant Congress, San Francisco, CA, July 2014, “Access to Donation among Native Americans”  
American Transplant Congress, Philadelphia, PA, July 2015, “The Penalty Faced By Native Americans in Transplantation: Reduced Access and Survival”  
American Transplant Congress, Philadelphia, PA, July 2015 “Native Americans and Post-Kidney Transplant Follow-Up: Lower in Quantity and Quality?”  
American Transplant Congress, Philadelphia, PA, July 2015 “Deleterious Effects in Kidney Transplantation Outcomes with Pre-Organ Procurement Iodine Contrast Exposure”

### **INVITED SEMINARS**

University of Wisconsin – Madison: Household Finance Seminar Series, Center for Financial Services/Institute for Research on Poverty, “Effect of SNAP-Related Work Requirements of Disability Claiming,” Madison, WI, January 2020  
State of New Mexico: Economic Development and Planning Committee “Economics of Recreational Cannabis,” Santa Fe, NM, November 2019  
University of Michigan, Ross School of Business, “Moral Hazard in Waitlisting for Kidney Transplantation,” Ann Arbor, MI, November 2017  
University of New Mexico, Department of Psychology, “Cannabis and Opioid Use,” Albuquerque, NM, March 2017  
University of South Florida, “Dynamic Inefficiencies from Quality Requirements: Evidence from Kidney Transplantation,” Tampa, FL, November 2015  
Indiana University-Purdue University Indianapolis, “Effects of Quality Requirements on Provider Behavior: Evidence from Kidney Transplantation,” Indianapolis, IN, March 2015  
Robert Wood Johnson Foundation Center for Health Policy, University of New Mexico, “Effects of Quality Requirements on Provider Behavior: Evidence from Kidney Transplantation,” Albuquerque, NM, March 2015  
University of Miami, “Organizational Learning-by-Doing”, Miami, FL, January 2013

## **POPULAR MEDIA REFERENCES** (selected)

*Boston Globe*: <https://www.bostonglobe.com/news/marijuana/2019/11/14/new-mexico-sizes-potential-recreational-pot-market/98DU67Se4EZMCMun3SFqXL/story.html>

*High Times*: <https://hightimes.com/news/recreational-cannabis-could-become-legal-in-new-mexico/>

*San Francisco Chronicle*: <https://www.sfchronicle.com/news/article/New-Mexico-sizes-up-potential-of-recreational-pot-14830599.php>

*Houston Chronicle*: <https://www.chron.com/news/article/New-Mexico-sizes-up-potential-of-recreational-pot-14830599.php>

*The Telegraph*: <https://www.thetelegraph.com/news/article/New-Mexico-sizes-up-potential-of-recreational-pot-14830599.php>

*The Alibi*: <https://alibi.com/cannabis/59921/Tax-Talk.html>

*Marijuana Moment*: <https://www.marijuanamoment.net/new-mexico-committee-gets-head-start-on-marijuana-legalization-for-2020-session/>

*Las Cruces Sun News*: <https://www.lcsun-news.com/story/news/local/new-mexico/2019/11/15/new-mexico-marijuana-legalization-work-group-discusses-possibilities/4202808002/>

*KRWG*: <https://www.krwg.org/post/some-democrats-including-papen-not-yet-endorsing-marijuana-legalization>

*The Growth Op*: <https://www.thegrowthop.com/cannabis-news/new-mexico-lawmakers-cant-make-up-their-mind-when-it-comes-to-cannabis-legalization>

*Forbes*: <https://www.forbes.com/sites/javierhasse/2019/02/27/study-patients-find-more-relief-in-marijuanas-psychoactive-compound-thc-than-in-cbd/#168487cd717a>

*Rollingstone*: [https://www.rollingstone.com/culture/culture-news/medical-pot-is-our-best-hope-to-fight-the-opioid-epidemic-198374/?fbclid=IwAR3l\\_VTaL-ODAHmfnygbrFo4hgf50u88s\\_1sT-YmKZwVj2\\_DDvZdH7tlhcc](https://www.rollingstone.com/culture/culture-news/medical-pot-is-our-best-hope-to-fight-the-opioid-epidemic-198374/?fbclid=IwAR3l_VTaL-ODAHmfnygbrFo4hgf50u88s_1sT-YmKZwVj2_DDvZdH7tlhcc)

*Green Entrepreneur*: <https://www.greenentrepreneur.com/article/329354>

## **REFeree SERVICE**

*Journal of Health Economics*

*Journal of Policy Analysis and Management*

*Berkeley Electronic Journal of Economic Analysis and Policy*

*American Journal of Public Health*

*International Journal of Health Policy and Management*

*Plos One*

*Journal of Psychosomatic Research*

*Demography*

*American Journal of Transplantation*

7th Annual Conference of the American Society of Health Economics, Scientific Committee

46<sup>th</sup> Hawaiian International Conference on Systems Sciences

## **GRANTS AND AWARDS**

University of Wisconsin – Madison, Institute for Research on Poverty’s 2019 –2020 Extramural Small Grant on Poverty, Retirement, and Disability Research (2019-2020)

University of New Mexico Research Allocation Committee Grant (2018-2019)

Robert Wood Johnson Foundation Center for Health Policy Travel Grant (April, July 2015, November 2015)

*Updated 01/16/2019*

Robert Wood Johnson Foundation Center for Health Policy Travel Grant (July 2014)  
Robert Wood Johnson Foundation Center for Health Policy Faculty Research Grant (2013-2014)  
Ross School of Business Travel Grant (2012)  
Rackham Graduate School Conference Travel Grant (2010, 2012)  
Clare E. Griffin Fellowship (2011)  
James and Ruth Close Scholarship (2010)  
Ross School of Business Fellowship (2006-2011)

## **TEACHING EXPERIENCE**

Continuing Legal Education – Reefer Madness: Part Deux, Center for Legal Education, New Mexico Bar Association, Albuquerque, NM 11/13/2019  
Continuing Medical Education – The Clinical Symposium on Medical Cannabis, Albuquerque, NM, 09/20/2019  
Industrial Organization – University of New Mexico (Fall 2017, Fall 2019)  
Topics in Health Economics – University of New Mexico (Spring 2017, Spring 2018)  
Principles of Microeconomics – University of New Mexico (Fall 2013, Spring 2014, Fall 2014, Fall 2015, Fall 2017, Spring 2019, Fall 2019)  
Intermediate Microeconomics – University of New Mexico (Fall 2015, Spring 2016)  
Microeconomic Theory I – University of New Mexico (Fall 2013, Fall 2014)  
Economics of Regulation – University of New Mexico (Spring 2014, Spring 2016, Spring 2017, Spring 2018, Spring 2019)  
Continuing Medical Education (1 credit) – Michigan Transplant Center (October 22, 2012)  
Business Economics 311 *Public Policies toward Business* – University of Michigan (Fall 2009)  
MBA Quantitative Workshops (Teaching Assistant) – University of Michigan (2008, 2009, 2010)  
EMBA Quantitative Workshops (Teaching Assistant) – University of Michigan (2008, 2010)

## **GRADUATE STUDENT ADVISEMENT**

### Committees on Studies:

Kristina Piorkowski  
Rajan Bishwakarma  
Mohammad Rahman  
Ewa Nurwita  
Usamah Wasif (chair)  
Avinandan Chakraborty (chair)  
Niraj Khatiwada  
Disha Shende

### Dissertation Committees (Member)

Amir Poorfakari (engineering) - Transportation Analyst at East-West Gateway Council of Governments  
Martha Perez-Arriaga (computer science) – Veterans Affairs, Department of Defense  
Xuanhao He (economics) – post-doctoral fellow at Tulane School of Public Health and Tropical Medicine  
Disha Shende (economics) – current student  
Muhammed Adnan Shahid (economics) – current student

### Dissertation Committees (Chair)



Usamah Wasif – current student

**MEMBERSHIPS**

American Economic Association  
American Society of Health Economists  
Association for Policy Analysis and Management

**PROFESSIONAL EXPERIENCE**

IT Convergence, Naperville, IL – Project Manager (2006)  
Rackspace Managed Hosting, San Antonio, TX – Business Analyst, Team Manager (2004-2005)  
Texas Association of Community Action Agencies, Austin, TX – Program Intern (2003)  
Travelers Special Liability Group, Houston, TX – Account Manager (1999-2002)

**CITIZENSHIP**

U.S. and Germany

**LANGUAGES**

German (basic) and Spanish (proficient)