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I. BIOSKETCH

I currently serve as an assistant professor in the University for Arkansas for Medical Sciences (UAMS), Department of Family and Preventive Medicine. My research seeks to identify health policies and interventions that promote optimal family and child wellbeing across socioeconomic levels, cultural backgrounds, and geographic areas. Under this overarching agenda, I specialize in application of quasi-statistical research design in policy and program evaluations. I apply my theoretical and computational mathematical expertise to design and conduct complex models in the areas of home visiting programs and child welfare interventions evaluations.

II. EDUCATION

Ph.D. Mathematics	University of Maryland, College Park, MD	2014
B.A. Mathematics, <i>Highest Honors Degree</i>	University of California, Berkeley, CA	2008

III. CURRENT POSITION

Assistant Professor Research and Evaluation Division, Department of Family and Preventive Medicine College of Medicine UAMS, Little Rock, AR	2020 –
Resident Research Education Coordinator Department of Family and Preventive Medicine College of Medicine UAMS, Little Rock, AR	2020 –

IV. ACADEMIC AND PROFESSIONAL POSITIONS

Assistant Director of Health Policy Research Arkansas Center for Health Improvement Little Rock, AR	2019 – 2022
Mathematician Office of Debt Management US Department of the Treasury Washington, DC	2015 – 2017

Research and Teaching Assistant
Department of Mathematics
University of Maryland
College Park, MD

2009 – 2013

V. FUNDED RESEARCH

A. Currently Active and Awarded Support

US DHHS HRSA Innovation Award HRSA-22-102 (McKelvey/Lewis, PI: AWARDED INACTIVE)
03/01/2022-09/30/2024

Coaching the Coaches: Supporting Family Involvement in Virtual Home Visits through Video Feedback. This project supports virtual delivery of evidence-based home visitation by generating knowledge on implementation and effectiveness of a video-coaching innovation.

Role: Co-Principal Investigator, 30% effort
Total budget: \$1,999,754

OPRE ACF 90YR0146 (Lewis, PI) 09/01/2022—03/29/2024

Office of Planning, Research and Evaluation/ACF funded project. The *objective* of this study is to construct Protective childhood experiences (FMI-PCEs) as productive targets for ECE intervention. For the proposed study, using 15 years FMI data, we will examine the association of FMI-ACEs and FMI-PCEs with healthcare utilization and chronic conditions (e.g., asthma and ADHD) among early head start/head start children.

Role: Principal Investigator, 15% effort
Total budget: \$100,000

UAMS Team Science Voucher (Lewis, PI) 09/01/2022- 08/30/2023

Exploring the association between Medical Marijuana Status and Antiemetic Overuse. This project aims to determine whether pharmacologic properties of medical marijuana allow for the decreased rate of prescription of antiemetic drugs to patients starting on a chemotherapy regimen.

Role: Principal Investigator, 5% effort
Total budget: \$20,000

HRSA/UAMS Rural Telehealth Research Center (Lewis/Gressler, PI) 09/01/2022- 08/30/2023

Prenatal Opioid Use Disorder Treatment delivered through Telehealth and Punitive and Reporting State Policies. Many states have punitive or mandated reporting laws related to prenatal SUD that impede pregnant women who use substances from receiving proper health care, consequently failing to help infants and mothers. This project aims to determine whether these policies may have resulted in pregnant women disproportionately unable to benefit from the telehealth policy changes enacted to continue health services during the COVID-19 pandemic.

Role: Principal Investigator, 13% effort
Total budget: \$50,000

US DHHS HRSA X10MC29461 (McKelvey, PI) 10/01/2018—09/30/2023

Evaluation of Arkansas' Maternal, Infant, and Early Childhood Home Visiting Programs. The study evaluates the implementation of home visiting in 29 Arkansas counties using evidence-based home visiting

programs (Healthy Families America, Parents as Teachers, Home Instruction for Parents of Preschool Youngsters)
Role: Co-Investigator, 20% effort
Total budget: \$1,909,570

AR Department of Human Services 4600045495 (McKelvey, PI) 10/1/2019-9/30/2024

Evaluation of Arkansas' Family First Prevention Services and SafeCare Programs.

The study evaluates the implementation of home visiting in all Arkansas counties using evidence-based home-based child welfare programs (SafeCare, Family Centered Treatment, Intercept, Triple P, and Homebuilders)

Role: Co-Investigator, 31% Effort
Total budget: \$2,912,500

CMS (CFDA93.778) and AR State General Revenue 4600034068 (Thompson PI) 07/01/2019-06/31/2023

Deliverable C Title: Healthy Active Arkansas Obesity Data Analysis. In an effort to support cost-containment and health improvement strategies associated with Medicaid reform, this project examines the impact of obesity on children's health and the associated medical utilization and costs of obesity-related conditions.

Role: Deliverable C Project Leader (FY2020)/Project co-Leader (FY2021,2022)/Lead Analyst (FY2019).
10-20% Effort

B. Completed Research Support

Grants

UAMS Barton Award (Lewis, PI) 01/01/2022- 12/31/2022

Adverse Childhood Experiences of Arkansas's Children: Co-occurring Risks and Links to Health Outcomes.

The goal of this study is to identify Adverse Early Childhood Experiences co-occurrences that predict lower preventive care utilization and elevated risks of chronic conditions.

Role: Principal Investigator, 0% effort (in-kind)
Total budget: \$25,000

CommonWealth Fund 20213058 (Lewis, PI) 01/01/2021-03/31/2022

Inequities in Telemedicine Primary Care Access Among Medicaid Adults. This project is focused on assessing systematic bias in telemedicine and office-visit access experienced by Medicaid enrollees during the COVID-19 pandemic.

Role: Principal Investigator
Total budget: \$66,219

UAMS TRI UL1 TR003107 (Whiteside-Mansell, PI) 01/01/2018-06/31/2019

Adverse Childhood Experiences of Rural and Underserved Arkansans: Identification of Risk. The major goals of this project are to examine the use of the Family Map as a tool to identify children in rural setting in need of early intervention.

Role: Co-Investigator, 0% effort (In-kind)
Total budget: \$49,972

VI. SCHOLARLY ACTIVITIES

*Denotes articles in which I was the first, senior, and/or corresponding author

†Denotes trainee

A. Published Peer Reviewed Manuscripts

1. *McKelvey, L.M., Goudie, A., Li, J., **Lewis, K.N.** (Accepted). Examining Impacts of Healthy Families America on Infant Health Care. *Academic Pediatrics*.
2. ***Lewis, K.N.**, McKelvey, L.M., Zhang, D., Moix, E., & Whiteside-Mansell, L. (2023). Risks of adverse childhood experiences on healthcare utilization and outcomes in early childhood. *Child Abuse & Neglect*, 145, 106396. <https://doi.org/10.1016/j.chiabu.2023.106396>
3. ***Lewis, K.N.**, Tilford J.M., Goudie A., Beaver J., Casey P., McKelvey L.M. (2023). Cost-Benefit Analysis of Home Visiting to Reduce Infant Mortality Among Preterm Infants , *Journal of Pediatric Nursing*
4. Whiteside-Mansell, L., McKelvey L. M., **Lewis, K.**, Peters, R. (2022). Screening for Adverse Childhood Experiences (ACEs) before age 3: Evidence for The Family Map Inventories. *NHSA Dialog: A Research-to-Practice Journal for the Early Childhood Field*
5. McKelvey, L. M., **Lewis, K.**, Edge, N.A., Whiteside-Mansell, L., (2022). Engaging Families and Addressing Adverse Childhood Experiences in Early Head Start. *NHSA Dialog: A Research-to-Practice Journal for the Early Childhood Field*
6. ***Lewis, K.N.**, Goudie A., Wilson C., Tawiah E., Li, J., Thompson J. (2022) Inequities in Telehealth Use Associated with Payer Type During the COVID-19 Pandemic. *Telemedicine journal and e-health : the official journal of the American Telemedicine Association*, 10.1089/tmj.2021.0618.
7. Donovan, C., Rose, C., **Lewis, K.N.**, et al. (2022). Reduced SARS-CoV-2 incidence in mask-required K–12 school districts compared with mask-optional school districts — Arkansas, August–October 2021, *MMWR*, 71(10);384–389
8. McKelvey L., **Lewis K.N.**, Beavers J., Casey P.H., Irby C., Goudie A. (2021). Home visiting for NICU graduates: Impacts of Following Baby Back Home. *Pediatrics*.148(1):e2020029397
9. Self J., Callison K., Goudie A., **Lewis K.N.**, Thompson, J.W. (2021). Medicaid Expansion and Healthcare Use for Adults Experiencing Homelessness in Arkansas. *HealthAffairs*.40(1)
10. ***Lewis K.**, Goudie A., Kahn R., Li J., Porter A., Zohoori N., Thompson J.W. (2020). COVID-19 comorbid conditions associated with severe outcomes in Arkansas. *Journal of the Arkansas Medical Society*, November 2020.
11. Goudie A., Martin B., Li C., **Lewis K.N.**, Han X, Kathe N, Wilson J.C., Thompson J.W. (2020). Higher Rates of Preventive Health Care among Commercially Insured Compared to Medicaid: Findings from the Arkansas Health Care Independence 'Private Option' Program. *Medical Care*
12. Schneider, J. P., **Nakamura, K.**, & Margetis, D. (2014). Role of chemical potential in relaxation of faceted crystal structure. *Physical Review E - Statistical, Nonlinear, and Soft Matter Physics*, 89(6). PMID: 25019795.
13. Bläßle, A., Bebart, J., Lifeng, L., **Nakamura, K.**, Nolan, K., Paraschiv, V. (2013). Optical touch sensing: practical bounds for design and performance. *IS&T/SPIE Electronic Imaging*, Vol. 8657.

14. ***Nakamura, K.**, & Margetis, D. (2013). Phase-field model for reconstructed stepped surface. *Physical Review E - Statistical, Nonlinear, and Soft Matter Physics*, 88(1). PMID: 23944596.
15. ***Nakamura, K.**, & Margetis, D. (2012). Discrete and continuum relaxation dynamics of faceted crystal surface in evaporation models. (SIAM Journal on) *Multiscale Modeling & Simulation*, Vol. 11(1).
16. Margetis, D., & **Nakamura, K.** (2012). Homogenization of composite vicinal surfaces: Evolution laws in 1+1 dimensions. *Physica D: Nonlinear Phenomena*, 241(14), 1179–1189.
17. Margetis, D., & **Nakamura, K.** (2011). From crystal steps to continuum laws: behavior near large facets in one dimension. *Physica D Nonlinear Phenomena*, 240(13), 1100--1110.

B. Manuscripts under review and preparation

1. *McKelvey L.M., Goudie, A., Li, J., **Lewis, K.N.** (*under revision*) Examining Impacts of Healthy Families America on Infant Health Care, *Academic Pediatrics*
2. *Whiteside-Mansell L, Mikles-Shluterman J, ..., **Lewis K.N.**, et al. (*submitted*) Supporting Rural Parents and Children: WIC Office Community Health Workers Delivery of Brief Parenting Education, *Infant Behavior and Development*
3. ***Lewis, K.N.**, Goudie A., Wilson C., Tawiah E., Li, J., Thompson J. (*preparing for submission*) Payer Mix Association with Primary Care Telehealth Service Trajectories.

C. Peer Reviewed Published Abstracts and Conference Papers

1. *†Baltz, A., Peng, C., Gressler, L., Bhatti, S., **Lewis, K.** Exploring the association between medical marijuana cardholder status and antiemetic overuse. An abstract publication at 2023 American Society of Clinical Oncology Annual Meeting. Chicago, IL, USA. June 2, 2023.
2. Whiteside-Mansell, L., McKelvey L. M., & **Lewis, K.** Using the Family Map Inventories to Individualize a Response to Adverse Childhood Experiences (ACEs). Paper symposium presented to the 2021 SRCDC Biennial Meeting April, 2021.
3. †Chopra D, †Bhandari NR, †Kathe N, Moore G, **Lewis K**, Li C, Thompson JW, Goudie A, and Martin BC. Differences in Antidepressant Medication Management Between Commercially Insured And Traditional Medicaid For Low Income Adults In Arkansas. A Poster Presented at the International Society for Pharmacoeconomics and Outcomes Research International Meeting. Baltimore, MD, USA. May 22, 2018. (*Value in Health*, 21 (Suppl 1)).
4. †Bhandari NR, †Chopra D, †Kathe N, Moore G, **Lewis K**, Li C, Goudie A, and Martin BC. Contrasting Utilization of Inpatient Hospitalizations and Emergency Department Visits Between Medicaid And Commercially Insured Arkansans. A Poster Presented at the International Society for Pharmacoeconomics and Outcomes Research International Meeting. Baltimore, MD, USA. May 21, 2018. (*Value in Health*, 21 (Suppl 1)).
5. †Kathe N, †Chopra D, †Bhandari NR, Moore G, **Lewis K**, Li C, Goudie A, and Martin BC. Examining the Impact Of Arkansas Medicaid Expansion Through Premium Purchase On Utilization Of Preventative

Screening Services. A Poster Presented at the International Society for Pharmacoeconomics and Outcomes Research International Meeting. Baltimore, MD, USA. May 21, 2018. (PHP67).

6. †Kathe N, †Bhandari NR, †Chopra D, Moore G, **Lewis K**, Li C, Goudie A, and Martin BC. Impact of Arkansas Medicaid Expansion Through Premium Purchase On The Utilization And Access To Prenatal Visits. A Poster Presented at the International Society for Pharmacoeconomics and Outcomes Research International Meeting. Baltimore, MD, USA. May 21, 2018. (PIH42).

D. Policy Reports, Non-Peer Review Publications

1. McKelvey, L.M., **Lewis, K.N.**, Ashby, K. and Fitzgerald, S. (2022). Arkansas Family First Prevention Services Act Evaluation: SafeCare® Model. University of Arkansas for Medical Sciences.
2. Goudie, A., **Lewis, K.**, & Thompson, J.W. (2021). Arkansas child obesity growth patterns and evaluations of preschool interventions on obesity in kindergarten. Arkansas Center for Health Improvement. Little Rock, AR.
3. University of Arkansas for Medical Science and Arkansas Center for Health Improvement. Arkansas Maternal, Infant and Early Childhood Home Visiting Program Evaluation of a Promising Practice: Following Baby Back Home. Submitted to Health Resources and Services Administration, December 2020.
4. Arkansas Center for Health Improvement, Arkansas Medicaid. Profiling Arkansas Child Obesity Growth Patterns, Risk Factors, and Health Outcomes. Arkansas Center for Health Improvement, June 2020.
5. University of Arkansas for Medical Science and Arkansas Center for Health Improvement. Arkansas Maternal, Infant and Early Childhood Home Visiting Program Evaluation of a Promising Practice: Following Baby Back Home. Submitted to Health Resources and Services Administration, December 2019.
6. Arkansas Center for Health Improvement. Champions for Health Pilot Project: Morrilton Intermediate School. Little Rock, AR: Arkansas Center for Health Improvement, August 2019.
7. Arkansas Center for Health Improvement and Arkansas Medicaid. Comorbid Conditions and Costs Associated with Childhood Obesity in Arkansas. Little Rock, AR: Arkansas Center for Health Improvement and Arkansas Medicaid, June 2019.
8. Arkansas Center for Health Improvement. Arkansas Health Care Independence Program (“Private Option”) Section 1115 Demonstration Waiver Final Report. Little Rock, AR: Arkansas Center for Health Improvement, June 2018.
9. **Nakamura, K.**, & Zhang, A. (2015). Technical Note on MC Curve Construction, US Treasury White Paper.

E. Unpublished Thesis and Dissertation

Nakamura, K. (2014). Evolution of crystal surfaces: Modeling and analysis, Ph.D Thesis. Thesis Chair: Dionisios Margetis

VII. SCIENTIFIC PRESENTATIONS

A. Invited Presentations

1. Zhang, D., **Lewis, K.**, McKelvey L., Whiteside-Mansell, L. (2022, October). Family Map Inventory: Adverse Childhood Experiences and Healthcare Utilization and Outcomes. APCD User Group Meeting. Little Rock, Arkansas.
2. **Lewis, K.**, Goudie, A., Tilford, M., McKelvey, L.M (2022, August). Evaluation Results of Following Baby Back Home. Invited presentation to the Maternal, Infant, and Early Childhood Home Visiting Evaluators' Community of Practice. Meeting 12. Virtual.
3. McKelvey, L. M, **Lewis, K.**, Goudie, A., & Beavers, J. (2020, August). Evaluation Results of Following Baby Back Home. Invited presentation to the Maternal, Infant, and Early Childhood Home Visiting Evaluators' Community of Practice. Meeting 12. Virtual.
4. McKelvey, L., Greenwood, T., **Lewis, KN.**, & Thompson, JW. Arkansas Medicaid Expansion: Future Opportunity & Evidence to Improve Child Health. Arkansas Department of Health Grand Round, May 2020.
5. McKelvey, L. & **Lewis, K.**, Goudie, A., & Beavers, J (2020, February). Evaluation Results of Following Baby Back Home. Presentation to the Scientific Advisory Committee of the Arkansas Department of Health. Little Rock, Arkansas.
6. **Lewis KN.** Reconstructing BMI Growth Curves Using Arkansas Child Population Referent Group, Center for Childhood Obesity Prevention External Advisory Committee Retreat, August 2019
7. **Lewis KN.** Determining the Strength of the Obesogenic Environment, Machine Learning Panel, AcademyHealth Annual Research Meeting, Washington D.C., June 2019
8. **Lewis KN.** Term Structure Models and Incorporating Views, Annual Joint G7 Debt Management Meeting, Ministry of Finance, London, UK, November 2016
9. **Nakamura, K.** Homogenization of Heterogeneous Crystal Surfaces in 1 + 1 Dimensions. AMS Annual Joint Mathematics Meeting, Baltimore MD, Jan 2014.
10. **Nakamura, K.** Influence of Microscopic Structures on Facet Motion, Material Defect Seminar Series, University of Michigan, July 2013
11. **Nakamura, K.** Stepped Surfaces: Remnants of Discrete Dynamics at a Facet in the Continuum Limit, Material Defect Seminar Series, IPAM, November 2012
12. **Nakamura, K.** Remnants of Discrete Dynamics at a Facet in the Continuum Limit, Applied PDE RIT, University of Maryland, October 2012
13. **Nakamura, K.** Proper Viscosity Solutions of Second-Order Equations, Informal Seminar, University of Tokyo, October 2012

B. Peer-Reviewed Research Presentations

Oral Presentations

National/International Meetings

1. Whiteside-Mansell, L., Bradley, R.H., McKelvey L.M., Ou, X., Acheson, A., Merhar, S., Vannest, J., Lin, W., Grewen, K., Baluyot, K., **Lewis, K.N.** (2023, July). *Virtual Collection of the Home Observation for Measurement of Environment (HOME) Inventory*. Presentation to the 2023 Meeting of the World Association for Infant Mental Health, Dublin Ireland.
2. Goudie A, **Lewis K**, Martin B, Kahn, R., Thompson J. Arkansas Child BMI Trajectories and Social and Environmental Determinants of Health, AcademyHealth State-University Partner Learning Network (SUPLN), Virtual Platform, October 2022.
3. Donovan C, Vang K, Rose C, **Lewis K**, et al. Comparing school-based SARS-CoV-2 weekly incidence in mask-required vs. mask-optional K-12 settings – Arkansas 2021. Council of State and Territorial Epidemiologists, Louisville, Kentucky, June 2022.
4. Goudie A, **Lewis KN**, Thompson J. Breastfeeding Variation across States Requires State-Level Solutions. AcademyHealth Annual Research Meeting, Washington DC, June 2022.
5. **Lewis KN**. Telehealth Utilization during COVID-19: Policy Implications from Three States: Inequities in Telehealth Use Among Low-Income Arkansas Adults Associated with Payer Type, AcademyHealth National Health Policy Conference, April 2022.
6. Thomsen, M, Fang D, Nayga R., and **Lewis, K**. Impact of School Exposure on Body Mass Index of Early Elementary Children. Agricultural & Applied Economics Association (AAEA) Annual Meeting, Austin, Texas, August 2021.
7. Whiteside-Mansell, L., McKelvey L. M., & **Lewis, K**. Using the Family Map Inventories to Individualize a Response to Adverse Childhood Experiences (ACEs). Paper symposium presented to the 2021 SRCD Biennial Meeting April, 2021.
8. Goudie A, **Lewis K**, Martin B, Wilson, C., Thompson J. Does Type of New Health Coverage Impact Mortality? Findings from the Arkansas “Private Option” Medicaid Expansion Program. AcademyHealth Annual Research Meeting, Virtual, July 2020
9. Goudie A, Martin B, Kathe N, Li C, Moore G, **Lewis K**, Thompson J. Higher Rates of Preventive Health Care Among Premium Assistance Commercial, Compared to Medicaid Insured: Findings from the Arkansas Health Care Independence Program “Private Option.” AcademyHealth Annual Research Meeting, Seattle WA, June 2018
10. **Nakamura, K**. Optical Touch Sensing: Analytic and Computational Aspects, Final Presentation for MMIW, University of Calgary, July 2012

Regional Meetings

1. **Lewis KN**. Reconstructing BMI Growth Curves Using Arkansas Child Population Referent Group, University of Arkansas for Medical Science Biostatistics Seminar, February 2020
2. **Nakamura, K**. Some Classical and Modern Methods for Free Boundary Problems, Student PDE Seminar, University of Maryland, September 2012
3. **Nakamura, K**. Homogenization of Heterogeneous Materials, Applied PDE RIT, University of Maryland, November 2011

4. **Nakamura, K.** Steps and facets in model of evaporation-condensation, Non-Equilibrium Interface and Surface Dynamics RIT, University of Maryland, October 2011
5. **Nakamura, K.** Evolution of Crystal Surface: Boundary Conditions and Decay Estimates, Preliminary Oral Exam, University of Maryland, December 2010
6. **Nakamura, K.** How Do You Write Boundary Conditions At Crystal Facets?, Non-Equilibrium Interface and Surface Dynamics RIT, University of Maryland, December 2010
7. **Nakamura, K.** Evolution of Crystal Surface: Boundary Conditions and Decay Estimates, Applied PDE RIT, University of Maryland, November 2010
8. **Nakamura, K.** Equivalent Constructions of Non-commutative Tori, Student Analysis Seminar, University of Maryland, October 2009

C. Posters

National/International Meetings

1. **Lewis KN, McKelvey L.** Exploring Impacts of the Healthy Families America Home Visiting Program on Birth Outcomes, National Research Conference on Early Childhood, Virtual Meeting, June 2022.
2. **Lewis KN, McKelvey L.** Examining the Health and Healthcare Use of Infants in the Healthy Families America Home Visiting Program. National Research Conference on Early Childhood, Virtual Meeting, June 2022.
3. McKelvey L., **Lewis KN.** Increasing Maternal Health Care Utilization through Home Visiting: A Quasi-Experimental Study of Healthy Family America. National Research Conference on Early Childhood, Virtual Meeting, June 2022.
4. **Lewis KN, Donovan, K. et al.** Comparing Sars-Cov-2 Weekly Incidence in Mask-Required Vs. Mask-Optional K-12 Schools – Arkansas 2022. AcademyHealth Annual Research Meeting, Washington DC, June 2022.
5. **Lewis KN, Goudie A, Adesoba T*, Wilson C, Taiwah E., Li J, Thompson, J.** Inequities in Telehealth Use Associated with Payer Type during the COVID-19 Pandemic. Presented at AcademyHealth Annual Research Meeting, Washington DC, June 2022.
6. **Lewis KN, Goudie A, Thompson JW.** Classification of Arkansas Hospitals by Pre- and Post-Medicaid Expansion Profit Margin Trends Using a Sequential Process Growth Mixture Model. Accepted to present at Modern Modeling Methods Conference, Storrs CT, June 2020.
7. McKelvey L. M., **Lewis, K., Goudie, A., Beavers, J., Irby, C., & Edge, N. A.** (2020, June). *Following Baby Back Home: Evaluation of Home Based Parenting Support for Low-Birth-Weight Preterm Infants.* Poster presented to the 2020 Virtual International Conference on Infant Studies.
8. **Lewis KN, Money K, Goudie A, Poe D, Thompson JW.** Health Data Collection, Linkage, and Validation without Personally Identifiable Information. Presented at International Conference on Health Policy Statistics, San Diego CA, January 2020.

9. **Lewis KN**, Goudie A, Wilson JC, Thompson JW. Secondary Economic Effects of Medicaid Expansion in Arkansas. Presented at AcademyHealth Annual Research Meeting, Washington DC, June 2019.
10. **Lewis KN**, Goudie A, Thompson JW. Estimation of Arkansas Childhood Type 2 Diabetes Mellitus Rates. Presented at AcademyHealth Annual Research Meeting, Washington DC, June 2019.
11. **Lewis KN**, Goudie A, Thompson JW. Probabilistic Validation of Data Linkage in Large Datasets without a Gold Standard. Presented at AcademyHealth Annual Research Meeting, Washington DC, June 2019.
12. **Lewis KN**, Money K, Goudie A, Poe D, Thompson JW. Using APCD Unique IDs for Data Linkage, Claims Data for Population Health, Linkage and Data Enhancement. Oral Presentation at National Association of Health Data Organization Annual Meeting, October 2018
13. **Lewis KN**, Goudie A, Li C, Han X, Martin B, Thompson JW. Methodological Approach for the Evaluation of the Arkansas Health Care Independence Program. Presented at AcademyHealth Annual Research Meeting, Washington DC, June 2018.

VIII. TEACHING AND EDUCATIONAL ACTIVITIES

A. Courses Taught

Calculus I: Introduction to Calculus, Instructor, University of Maryland, Summer 2014

Calculus III: Multivariable Calculus, TA, University of Maryland, Fall 2011

Introduction to Linear Algebra, TA, University of Maryland, Spring 2010

Introduction to Probability, TA, University of Maryland, Fall 2009

Introduction to Linear Algebra, Grader, University of California, Fall 2008

B. Teaching Lectures in Academic Settings

1. University of Arkansas for Medical Sciences, Department of Family and Preventive Medicine. *Introduction to RED Interventions and Research*, (PGY2 resident lecture), August 2022-2023
2. University of Arkansas for Medical Sciences, College of Pharmacy PSGP: Foundation of Research Methods Part II. *Time Series and Difference-in-Differences*, March 2023
3. University of Arkansas for Medical Sciences, Honors in Underserved Primary Care. *Mini-Reading Workshop*, (medical student lecture), November 2022
4. University of Arkansas for Medical Sciences, Honors in Underserved Primary Care. *Introduction to Research*, (medical student lecture), August 2022
5. University of Arkansas for Medical Sciences, Department of Family and Preventive Medicine. *Introduction to Research*, (PGY1 resident lecture), August 2021-2022
6. University of Arkansas for Medical Sciences, Department of Family and Preventive Medicine. *Introduction to Directed Writing*, (resident lecture), June 2022
7. Peds Place Teleconference, Arkansas Children's Hospital, *Following Baby Back Home: Examining Impacts of Home Visiting for NICU Graduates*, September 2021
8. University of Arkansas for Medical Sciences; College of Public Health, HPMT 6313 Advanced Methods in Health Services Research, Guest Speaker on Causal Analysis, December 2021

9. University of Arkansas for Medical Sciences; College of Public Health, HPMT 6315 Advanced Methods for Quality and Health Outcomes Research, Guest Speaker on Propensity Score Match Analysis, October 2020
10. University of Arkansas for Medical Sciences; College of Public Health, HPMT 6323 Advanced Econometric Methods and Special Topics, Guest Speaker on Propensity Score Match Analysis, April 2020

C. Media Contribution

Contributed to 85 new stories from 66 outlets for the paper published in MMWR entitled, SARS-CoV-2 Incidence in K–12 School Districts with Mask-Required Versus Mask-Optional Policies — Arkansas, August–October 2021, including US News, CNN, the Washington Post, Forbes in 2022

D. Resident and Fellow Advising

Journal Club Consultation 6 residents in AY2022, 3 residents* in AY2021. *Due to the COVID-19 pandemic, there were limited Journal Club meetings.

2023 German Corrales, resident, UAMS College of Medicine DFPM (team member in a project)

2022 – 2023 Alan Baltz, Oncology fellow, UAMS College of Medicine Department of Internal Medicine (team member in a project)

E. Graduate and Medical Student Advising

2022 – 2023 Elise Moix, medical student, UAMS College of Medicine (team member in a project)

2021 Taiwo Adesoba, Ph.D candidate, UAMS College of Public Health (Internship Supervisor)

IX. SERVICE ACTIVITIES

A. Grant Review Activities

NIH CTSA External Reviewers Exchange Consortium (CEREC), 2022

B. Services to Academic/Professional Journals and Editorial Boards

Journal Reviewer:

mHealth, 2023 –

Telemedicine and e-Health, 2022 –

Children and Youth Services Review Journal, 2022 –

Infancy Journal, 2021 –

C. Professional Service Activities

Society Service

Maternal Health Task Force, Arkansas Department of Health 2023-2025 (two year appointment)

Arkansas All-Payer Claims Database Committee 2023 –

Public Health Research Consortium, Arkansas Department of Health, 2022 –

CDC/Arkansas Department of Health COVID-19 Research Task Force, 2021 – 2022

Conference Submission Reviewer:

AcademyHealth Annual Research Meeting Methods Research Section, 2022

Administration for Children and Families' (ACF) National Research Conference on Early Childhood, 2022

D. Community and Public Service Activities

Pulaski Height Methodist Church, Child Learning Center Board Member, 2021 – 2022

East Bay Conservation Corps, Volunteer Tutor 2007 – 2008

E. Professional Memberships

AcademyHealth, 2017 – 2023

American Mathematical Society, 2009 – 2014

F. Other University Activities

Medical Student Entrance Interviewer, UAMS, Oct 2022

Organizer for Student PDE Seminar, UMD, Sept 2012-2014

Organizer for Directed Reading Program, UMD, May 2012-2014

Mentor for Directed Reading Program, UMD, Fall 2011

Organizer for Study Group on Besov Space, UMD, Spring 2011

Counselor for PROMYS program, Boston University, MA, June 2008-August 2008

Summer Intern for Mathematical Science Research Institute, CA, June 2005-August 2005

XI. AWARDS AND HONORS

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|------------|---|
| 2013—2014 | Graduate Dean's Award (Top 10 Graduates throughout the University),
University of Maryland |
| 2012 | Gold Medal in Teaching Excellence (Top 5 teaching assistants), University of
Maryland |
| 2011 | Monroe H. Martin Graduate Research Fellowship (1 Ph.D in math/physics),
University of Maryland |
| 2011 | Graduate Student Summer Research Fellowship, University of Maryland |
| 2008 | Highest Honors Degree, University of California, Berkeley |
| 2008 | Dorothea Klumpke Roberts Prize (Top 5 Graduates), University of California,
Berkeley |
| 2008 | Highest Distinction in General Scholarship, University of California, Berkeley |
| 2007 –2008 | International Student Scholarships, University of California, Berkeley |
| 2008 | Dean's List, University of California, Berkeley |