GARGI DESHPANDE

📞(470)-883-4992 · in linkedin.com/in/gargingp · ✉ gargi-deshpande@ouhsc.edu · 🌐 gargideshpande.com

EDUCATION

University of Oklahoma Health Science Center, Oklahoma City *Aug 2022 - May 2026*
PhD Epidemiology - Department of Biostatistics and Epidemiology.
Coursework: Methods in Infectious Diseases, Advanced Epidemiological Methods,
Survival and Longitudinal Data Analysis, Clinical Trials, Geographic Information System (GIS).

Texas A&M Health Science Center, College Station *Aug 2019 - May 2021*
Master of Public Health- Department of Epidemiology and Biostatistics.

Krishna Institute of Medical Sciences, Karad *Jul 2013 - Jun 2018*
Bachelor of Dental Surgery.

TECHNICAL SKILLS

Data- RStudio, SAS, Stata, GIS, Tableau, Minitab, EpiInfo
Others- MS Office (Word, Excel, PowerPoint), LaTeX

RESEARCH PROJECTS

Assessing the Impact of Climate Factors on Human WNV Incidence and Wastewater Detection Across High-Risk U.S. States.
- Integrated human WNV case data from ArboNET with high-resolution NOAA climate datasets to derive metrics for extreme weather events.
- Applied poisson regression and negative binomial models to quantify associations between spatiotemporal climate variability and WNV in Texas, California, Colorado and Oklahoma.

Wastewater Surveillance of Influenza and RSV: Longitudinal Insights from Oklahoma.
- Designed a time series model to investigate seasonal patterns and correlation analysis to identify the time lag between peaks in positive tests/hospitalizations and wastewater concentrations of Influenza and RSV over a 21-month period.

The Impact of COVID-19 Fear on Mental Health of Community Behavioral Health Providers.
- Performed structural equation modeling to assess the relationship between COVID-19 fear and depression using survey data from community behavioral health providers in Oklahoma City.

Global Impact: Exploring the Interplay Between Reported Malaria Cases, Insecticide-Treated Bednets, and Antimalarial Availability in Children (2015-2021).
- Performed multivariate, local, and global clustering in ArcGIS to assess associations between malaria cases, ITN use, and antimalarial access, and identified spatial autocorrelations as well as malaria hot and cold spots.

Modelling the Epidemiology of Malaria and a Hypothetical Vaccine in a Heterogeneous Host Population.
- Constructed a compartmental SIS model depicting the transmission dynamics of clinical vivax malaria capturing the variance in risk of the host population.

NSF 22-620 Grant application- Measuring and Modeling Epidemiological Landscapes to Predict Transmission Patterns and Outbreaks of Zoonotic Diseases.
- Contributed to the grant application process by assembling subcontract documents, thoroughly reviewing the grant application, and verifying the accuracy of the budget.

WORK EXPERIENCE

Department of Biostatistics and Epidemiology *Graduate Research Assistant* *Aug 2022 - Present*
- Routinely monitoring the OU wastewater surveillance data to track food and waterborne, respiratory, and vector-borne diseases enabling early detection of potential outbreaks.

Niramai Health Analytix, India *Clinical Research Associate* *July 2021-July 2022*
- Led clinical validation studies and advanced research activities through literature reviews, data management, and analysis while collaborating with stakeholders for international grant applications.
- Conducted community breast cancer screening and education programs in primary healthcare centers in rural India.

James Lind Institute *Adjunct Faculty- Epidemiology*   *April 2021-July 2022*
- Designed teaching modules for Epidemiology and Biostatistics for MPH students and delivered lectures spanning detailed aspects of Disaster Epidemiology and the Impacts of Disasters on Public Health.
- Provided guidance to students throughout the course including the dissertation project.

Brazos County Health Department, USA *COVID-19 Case investigator/ Contact tracer*   *Sept 2020 - May 2021*

Department of Epidemiology and Biostatistics, SPH, USA *Research Assistant*   *Sept 2020 - May 2021*

March of Dimes, Houston, USA *Research Intern*   *May 2020 - Aug 2020*

School of Dental Sciences, India *Dental Surgery Intern*   *Aug 2017 - Sep 2018*

PUBLICATIONS

- **Deshpande, G.**, Beetch, J. E., Heller, J. G., Naqvi, O. H., & Kuhn, K. G. (2025). **Wastewater-Based Surveillance for Influenza and Respiratory Syncytial Virus: Insights from a 21-month study in Oklahoma** (Under review).
- **Deshpande, G.**, Rimal, B., Shelton, K., Vogel, J., Stevenson, B. & Kuhn, K. G. (2023). **Assessing the Influence of Climate Change and Environmental Factors on the Top Tick-Borne Diseases in the United States: A Systematic Review.** *Microorganisms*, 12(1), 50.
- Shelton, K., **Deshpande, G.**, Sanchez, G. J., Vogel, J. R., Miller, A. C., Florea, G., ... & Kuhn, K. G. (2024). **Real-Time Monitoring of SARS-CoV-2 Variants in Oklahoma Wastewater through Allele-Specific RT-qPCR.** *Microorganisms*, 12(10), 2001.
- Ramprasad, J., Krishnan, L., Gangadharan, C., **Deshpande, G.**, Madhu, H., Kakileti, S. T., Manjunath, G. (2022). **Performance of artificial intelligence-based breast cancer screening in a community setting: A real-world evaluation study.** *The Lancet Oncology*, 23, S20.
- Manjunath, G., Krishnan, L., **Deshpande, G.**, Madhivanan, P., Krupp, K. F. (2023). **Abstract P5-04-03: Analyzing the performance of Thermalytix, an AI-based breast cancer screening solution, in a community setting.** *Cancer Research*, 83(5Supplement), P5-04.
- Brand, M. W., Kuhn, K. G., Hilton, B. T., Boyina, K., **Deshpande, G.**, Suh, J., ... & Wiskur, B. (2024). **The Impact of COVID-19 Fear on Mental Health of Community Behavioral Health Providers.** *Disaster Medicine and Public Health Preparedness*, 18, e114.
- Kuhn, K. G., Shukla, R., Mannell, M., Graves, G. M., Miller, A. C., Vogel, J., Malloy, K., **Deshpande, G.,**, Florea, G., Shelton, K., et al. **Using Wastewater Surveillance to Monitor Gastrointestinal Pathogen Infections in the State of Oklahoma.** *Microorganisms*. 2023; 11(9):2193. https://doi.org/10.3390/microorganisms11092193
- Desai, M., **Deshpande, G.**, Elenwa, F., Foster, M. (2020). **Barriers and facilitators to the self-management of mental health amongst the adult population in the United States during the COVID-19 pandemic: A systematic review.**

CONFERENCE PRESENTATIONS

- Paper presentation: Wastewater-Based Surveillance for Influenza and Respiratory Syncytial Virus: Insights from a 21-month study in Oklahoma at the Graduate Research Education and Technology Symposium, University of Oklahoma Health Sciences Center. April 2025.
- Poster presentation: Vaccines do not cause Autism: Evaluating injuries relating to Autism Spectrum Disorder using vaccine adverse event reporting system data (CDC) at National Public Health week, American Public Health Association. April 2020.
- Paper presentation: Association of bedsharing with oral health-related feeding behaviors among infants at the Biennial Paediatric Dentistry Conference, South Asian Association of Paediatric Dentistry. May 2018.
- Oral presentation: Dental Ozone, at the National Conference of Indian Association of Oral Medicine and Radiology. September 2018.
- Poster presentation: "Tooth in Eye" at the FDI Annual World Dental Congress. September 2014.

AWARDS AND HONOURS

- GREAT Graduate Student Association- Award for Scientific Achievement, April 2025.
- Awarded the Hudson Fellowship under the Hudson Fellows in Public Health program, 2024.
- Recognised as Scientific Speaker by the South Asian Association of Paediatric Dentistry, 2018.