



## Brian Travis Rice

Clinical Associate Professor, Emergency Medicine

### CLINICAL OFFICE (PRIMARY)

- **Stanford Dept of Emergency Medicine**

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### Bio

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#### BIO

Brian Rice is a Clinical Associate Professor in the Department of Emergency Medicine at the Stanford University School of Medicine. He is a member of the Stanford Emergency Medicine International group with a focus on research including applied epidemiology to guide development efforts.

Dr. Rice was granted his MDCM from the McGill University Faculty of Medicine in 2008. He did a preliminary year in Internal Medicine at St. Mary Medical Center in Long Beach, CA followed by the completion of his Emergency Medicine Residency at Los Angeles County + USC, graduating in 2012. After residency, he completed a Fellowship in Global Health and International Emergency Medicine via a combined program at Yale University and the London School of Hygiene and Tropical Medicine where he received a MSc in Tropical Medicine and International Health as well as a Diploma in Tropical Medicine and Hygiene in 2014. He worked at NYU/Bellevue from 2014 – 2018 and has been on faculty at Stanford since 2018. He is also the Research Director for Global Emergency Care, a US and Ugandan-based NGO focused on providing “task-sharing” training in emergency medicine for non-physician clinicians.

His research work has focused on task-sharing in emergency medicine as well as chief complaints and quality indicators in low- and middle-income countries. He has worked clinically in Thailand, Cambodia, Liberia and Uganda and has been an invited speaker both nationally and internationally for his research work. His current research efforts focus on medevac utilization by non-physicians in rural Alaska Native communities.

#### CLINICAL FOCUS

- Emergency Medicine
- Applied Epidemiology
- Global Health

#### ACADEMIC APPOINTMENTS

- Clinical Associate Professor, Emergency Medicine
- Member, Maternal & Child Health Research Institute (MCHRI)

## PROFESSIONAL EDUCATION

- Residency: LAC USC Emergency Medicine Residency (2012) CA
- Fellowship: Yale University Office of the Registrar (2014) CT
- Board Certification: Emergency Medicine, American Board of Emergency Medicine (2013)
- Internship: St Mary Medical Center Internal Medicine Residency (2009) CA
- Medical Education: McGill University Faculty of Medicine (2008) Canada

## Research & Scholarship

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### CURRENT RESEARCH AND SCHOLARLY INTERESTS

Developing data-driven approaches to defining and comparing chief complaints from emergency and unscheduled acute care in low- and middle-income countries

## Publications

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### PUBLICATIONS

- **Community-engaged artificial intelligence: an upstream, participatory design, development, testing, validation, use and monitoring framework for artificial intelligence and machine learning models in the Alaska Tribal Health System.** *Frontiers in artificial intelligence journal* : EMJ  
Rice, B. T., Rasmus, S., Onders, R., Thomas, T., Day, G., Wood, J., Britton, C., Hernandez-Boussard, T., Hiratsuka, V.  
2025; 8: 1568886
- **Where the road ends: emergency care sensitive conditions drive excess mortality in medevac-dependent rural Alaska.** *Emergency medicine journal* : EMJ  
Rice, B., Britton, C., Rasmus, S., Hernandez-Boussard, T.  
2024
- **AI-based approach for transcribing and classifying unstructured emergency call data: A methodological proposal.** *PLOS digital health*  
Costa, D. B., Pinna, F. C., Joiner, A. P., Rice, B., Souza, J. V., Gabella, J. L., Andrade, L., Vissoci, J. R., Neto, J. C.  
2023; 2 (12): e0000406
- **Mortality after emergency unit fluid bolus in febrile Ugandan children.** *PloS one*  
Rice, B., Hawkins, J., Nakato, S., Kamara, N.  
2023; 18 (8): e0290790
- **Emergency care of sepsis in sub-Saharan Africa: Mortality and non-physician clinician management of sepsis in rural Uganda from 2010 to 2019.** *PloS one*  
Rice, B., Calo, S., Kamugisha, J. B., Kamara, N., Chamberlain, S., Global Emergency Care Investigator Study Group  
2022; 17 (5): e0264517
- **Bias at Warp Speed: How AI may Contribute to the Disparities Gap in the Time of COVID-19.** *Journal of the American Medical Informatics Association* : JAMIA  
Roosli, E., Rice, B., Hernandez-Boussard, T.  
2020
- **Medevac Utilization and Patient Characteristics in Rural Alaska 2010 to 2018.** *Air medical journal*  
Rice, B. n., Wood, J. n., Britton, C. n., Strehlow, M. n., Goodwin, S. n.  
2020; 39 (5): 393–98
- **Defining high-risk emergency chief complaints: data-driven triage for low- and middle-income countries.** *Academic emergency medicine : official journal of the Society for Academic Emergency Medicine*  
Rice, B. n., Lanza, J. n., Mowafi, H. n., Thadeus Kamara, N. n., Mulogo, E. M., Bisanzo, M. n., Nikam, K. n., Kizza, H. n., Newberry, J. A., Strehlow, M. n., Kohn, M. n.  
2020
- **Graph augmented transformers improve chemotherapy toxicity symptom extraction from clinical notes.** *Nature communications*

- Saquand, E., Naderalvojud, B., Schuessler, M., Pillai, M., Rice, B. T., Blayney, D. W., Hernandez-Boussard, T.  
2026
- **Surgical Disease Burden, Outcomes, and Roles of Non-Physician Clinicians in Ugandan Emergency Departments.** *The western journal of emergency medicine*  
Chamberlain, S., Ugwu-Dike, P., Mbiine, R., Sims, T., Rice, B. T.  
2025; 26 (4): 994-1001
  - **Large Language Models Using Free Text Clinical Notes Outperform ICD Coding in Identifying Patients With and Without Glaucoma**  
Mungle, T., Andrews, C. A., Pershing, S., Rice, B., Wang, S. Y., Pillai, M., Bicket, A. K., Rosenthal, J. M., Zhang, A. D., Le, W., Ludwig, C. A., Mekonnen, B., Hernandez-Boussard, et al  
ASSOC RESEARCH VISION OPHTHALMOLOGY INC.2025
  - **Clinical emergency care quality indicators in Africa: a scoping review and data summary.** *BMJ open*  
Pickering, A. E., Malherbe, P., Nambuba, J., Bills, C. B., Hynes, E. C., Rice, B.  
2023; 13 (5): e069494
  - **Improved First Dose Conversion of Supraventricular Tachycardia Using Weight-Based Adenosine.** *Cureus*  
Deck, C. M., Dang, B., Ashenburg, N., Rice, B.  
2023; 15 (3): e35995
  - **Natural language processing to classify electrocardiograms in patients with syncope: A preliminary study.** *Health science reports*  
Quinn, J., Kim, D., Rice, B. T., Hao, W. D.  
2022; 5 (6): e904
  - **Arsenic Toxicity From the Ingestion of Terracotta Pottery.** *The Journal of emergency medicine*  
Chiu, C., Fisk, C. A., Rice, B. T., Garcia, E. C.  
2022
  - **Emergency Medical Services (EMS) Utilization in Zimbabwe: Retrospective Review of Harare Ambulance System Reports.** *Annals of global health*  
Muchatuta, M., Mudariki, S., Matheson, L., Rice, B., Chidzonga, M., Walker, R., Strehlow, M., Newberry, J.  
2022; 88 (1): 70
  - **Emergency medicine physician supervision and mortality among patients receiving care from non-physician clinicians in a task-sharing model of emergency care in rural Uganda: a retrospective analysis of a single-centre training programme.** *BMJ open*  
Rice, B., Pickering, A., Laurence, C., Kizito, P. M., Leff, R., Kisingiri, S. J., Ndyamwijuka, C., Nakato, S., Adriko, L. F., Bisanzo, M.  
2022; 12 (6): e059859
  - **Essential Emergency and Critical Care: a consensus among global clinical experts** *BMJ GLOBAL HEALTH*  
Schell, C., Khalid, K., Wharton-Smith, A., Oliwa, J., Sawe, H. R., Roy, N., Sanga, A., Marshall, J. C., Rylance, J., Hanson, C., Kayambankadzanja, R. K., Wallis, L. A., Jirwe, et al  
2021; 6 (9)
  - **Household economic impact of road traffic injury versus routine emergencies in a low-income country.** *Injury*  
Mowafi, H., Rice, B., Nambaziira, R., Nirere, G., Wongoda, R., James, M., Group, G. W., Bisanzo, M., Post, L.  
2021
  - **A Short-Term Medical Mission in Rural Nepal: Chief Complaints, Medications Dispensed, and Unmet Health Needs.** *Cureus*  
Bitter, C. C., Dornbush, C., Khoyilar, C., Hull, C., Elsner-Boldt, H., Mainali, S., Rice, B., Visser, E.  
2021; 13 (6): e15427
  - **Negative pressure patient isolation device to enable non-invasive respiratory support for COVID-19 and beyond.** *BMJ innovations*  
August, A., Bolhouse, M., Rice, B., Wall, J. K.  
2021; 7 (2): 292-296
  - **Developing Emergency Triage Systems in Cambodia.** *Cureus*  
Khan, A., Rice, B., Acker, P.  
2020; 12 (10): e11233

- **The Association of Malnutrition and Disease Conditions in Mortality of Pediatric Patients Presenting to a Rural Emergency Department in Uganda.** *Pediatric emergency care*  
Ku, B. C., Zonfrillo, M. R., Periyanyagam, U., Bisanzo, M., Rice, B., Maling, S., Cohn, K. A.  
2020
- **Derivation and validation of a chief complaint shortlist for unscheduled acute and emergency care in Uganda** *BMJ OPEN*  
Rice, B., Bisanzo, M., Maling, S., Joseph, R., Mowafi, H., Global Emergency Care Investigator, Study Grp  
2018; 8 (6): e020188
- **What resources are used in emergency departments in rural sub-Saharan Africa? A retrospective analysis of patient care in a district-level hospital in Uganda** *BMJ OPEN*  
Bitter, C., Rice, B., Periyanyagam, U., Dreifuss, B., Hammerstedt, H., Nelson, S. W., Bisanzo, M., Maling, S., Chamberlain, S.  
2018; 8 (2): e019024
- **Pediatric Burn Management by Emergency Medicine Trained Non-Physician Clinicians in Rural Uganda** *EC Paediatrics*  
Pelis, M., Miller, S., Terry, B., Bisanzo, M., Maling, S., Modi, P., Periyanyagam, U., Rice, B.  
2018; 7 (4): 239-245
- **Pediatric Poisonings in a Rural Ugandan Emergency Department.** *Pediatric emergency care*  
Boyle, K. L., Periyanyagam, U., Babu, K. M., Rice, B. T., Bisanzo, M.  
2017
- **Not your regular high: cardiac dysrhythmias caused by loperamide.** *Clinical toxicology (Philadelphia, Pa.)*  
Wightman, R. S., Hoffman, R. S., Howland, M. A., Rice, B., Biary, R., Lugassy, D.  
2016; 54 (5): 454-8
- **Mortality in Children Under Five Receiving Nonphysician Clinician Emergency Care in Uganda.** *Pediatrics*  
Rice, B., Periyanyagam, U., Chamberlain, S., Dreifuss, B., Hammerstedt, H., Nelson, S., Maling, S., Bisanzo, M.  
2016; 137 (3): e20153201
- **Survey of point of care ultrasound usage in emergency medicine by Vietnamese physicians.** *Emergency medicine Australasia : EMA*  
Rice, B. T., Vu, H., Tran, L. D., Vo, Q. X., Mowafi, H.  
2015; 27 (6): 580-583
- **Fever in the returning traveler.** *Emergency medicine clinics of North America*  
Kotlyar, S., Rice, B. T.  
2013; 31 (4): 927-44
- **Intramedullary spinal neurocysticercosis presenting as brown-sequard syndrome.** *The western journal of emergency medicine*  
Rice, B., Perera, P.  
2012; 13 (5): 434-6