

**BIOGRAPHICAL SKETCH**

NAME: Gerber, Ben S.

eRA COMMONS USER NAME: bgerber

POSITION TITLE: Professor and Division Chief

**EDUCATION/TRAINING**

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Illinois, Urbana-Champaign	BS	06/1991	Honors Biology
University of Chicago Pritzker School of Medicine	MD	06/1995	Medicine
University of Michigan, Ann Arbor	Residency	06/1998	Internal Medicine
University of Illinois at Chicago	MPH	06/2005	Public Health Informatics

**A. Personal Statement**

I am a Professor, mHealth researcher, data scientist, and Division Chief of Health Informatics and Implementation Science in the Department of Population and Quantitative Health Sciences. My research background includes design, development, implementation, and evaluation of technology-based (mobile health and telehealth) interventions that promote chronic disease self-management and healthy behaviors in underserved, racial/ethnic minority populations. I have led multicenter and multidisciplinary trials in the clinical and community environment with funding from AHRQ, NIH, CDC, and private foundations.

I previously co-founded and co-directed the Precision Lifestyle Medicine and Translation Research (PREMIER) T32 post-doctoral training program at the University of Illinois at Chicago (currently serving on the advisory board since transferring to the University of Massachusetts in 2021) and more recently the CODER T32 training program. I have experience mentoring undergraduate, graduate, medical student, resident, fellow, and junior faculty members. I have a passion for training the next generation of clinician scientists as well as recruiting and retaining underrepresented trainees in research careers. Additionally, prior mentees have gone on to pursue substantial research careers in academia. Many trainees have acquired career development awards (I am currently the primary mentor for Dr. Alana Biggers through K01HL149775 and Dr. Daniel Amante through K01DK131318).

In 2016, I attended a conference held by the National Research Mentoring Network Committee on Institutional Cooperation Academic Network (NRMN-CAN), a three-day Mentor-Training workshop on effective mentoring. Since then, I have co-facilitated mentorship training for research faculty using the "Entering Mentoring" curriculum (from the Center for Improvement of Mentored Experiences in Research, or CIMER). I routinely adopt these curriculum-based practices in my own approach to mentorship. In February 2023, my colleagues on the UMass Chan Mentorship Steering Committee and I conducted four two-hour long CIMER-based workshops for the Directors and MD-PhD mentors in our MD-PhD Program. We are now working with Dr. Mark Johnson, Program Co-Director for Mentoring, to adapt and shorten this training with a focus on Culturally Aware Mentoring. This experience will eventually become a requirement for all faculty mentors in the Program.

I am enthusiastic about becoming a thesis advisor for MSTP T32 students, and otherwise participate in the Program as described above. I strongly support an approach to mentoring that includes structured mentor training, individual development plans, mentor-mentee contracts (or compacts), evaluation of the mentoring relationship, and a commitment to the guidelines for thesis project selection for students that is assessed through the instrument presented in Appendix S.4.15 of this application.

Ongoing and recently completed projects that I would like to highlight include:

NIH, 1T32HL171799  
McManus/Gerber (MPI)  
01/01/2024-12/31/2028  
CardiOvascular Digital hEalth Research (CODER) Training Program

NIH/NIDDK, 1R01DK133265  
Gerber (PI)  
04/05/2023-03/31/2028  
Team Support to Improve Glycemic Control Using CGM in Diverse Populations (TEAM CGM)

NIH, R01MH124685  
Boudreaux (PI), Role: Co-Investigator  
01/01/2021-11/30/2024  
Telehealth to Improve Prevention of Suicide (TIPS) in EDs.

NIH, 2 U54 HL143541-06  
McManus/Buchholz/Hafer (MPI), Role: Co-Investigator  
09/2023-08/2028  
The Center for Advancing Point of Care in Heart, Lung, Blood and Sleep Diseases

NIH, 1R34DA059935-01  
Wang (PI), Role: Co-Investigator  
09/2023-07/2026  
Adapting mHealth interventions to improve self-management of HIV and substance use among emerging adults in Zambia

NIH, R21LM014032  
Liu (PI), Role: Co-Investigator  
09/01/2023-08/31/2024  
DeepCertainty: Deep Learning for Contextual Diagnostic Uncertainty Measurement in Radiology Reports

NIH, 1P50MH129701  
Boudreaux/Kiefe (MPI), Role: Co-Investigator  
04/05/2023-03/31/2028  
The Center for Accelerating Practices to End Suicide through Technology Translation (CAPES)

NIH, 1R01HL168376-01  
Kitsiou (PI), Role: Co-Investigator  
04/2023-03/2028  
iCardia4HF: Factorial randomized controlled trial of a multifaceted and adaptive mHealth intervention for patients with heart failure

NIH/NIMH, R61 MH119237  
Ma (PI), Role: Co-Investigator  
07/01/2020-06/30/2025  
Study of a PST-Trained Voice-Enabled Artificial Intelligence Counselor (SPEAC) for Adults with Emotional Distress

UMass Chan Medical School, 1P50MH129701-01A1  
Liu (PI), Role: Co-Investigator  
10/2023-10/2024  
Multi-site Validation Study for Suicide Risk Prediction: Integrating the OHDSI Research Network

Venturewell, 75N92022D00010  
Soni (PI), Role: Co-Investigator  
11/15/2022-06/12/2024

## Design and Assessment of Home-Based Test to Treat Program: An Effectiveness-Implementation Hybrid Type 2 Study

NIH-NHLBI, 3U54 HL143541

McManus (PI), Role: Co-Investigator

06/01/2020-05/31/2022

Rad-X - Center for Advancing Point of Care Technologies (CAPCaT) Administrative Supplement

NIH/NIDDK, R01 DK108141

Gerber/Sharp (MPI)

07/15/2016-06/30/2022

mHealth for Diabetes Adherence Support

NIH/NINR, R21 NR018281

Kitsiou (PI), Role: Co-Investigator

08/01/2019-06/30/2022

An innovative mobile health intervention to improve self-care in patients with heart failure

NSF, 1838770

Ziebart (PI), Role: Co-Investigator

10/01/2018-09/30/2022

EAGER: The Virtual Assistant Health Coach: Learning to Autonomously Improve Health Behaviors

### Citations:

1. **Gerber BS**, Brodsky IG, Lawless KA, Smolin LI, Arozullah AM, Smith EV, Berbaum ML, Heckerling PS, Eiser AR. Implementation and Evaluation of a Low-Literacy Diabetes Education Computer Multimedia Application. *Diabetes Care*, 2005; 28(7):1574-1580. PMID: 15983303
2. **Gerber BS**, Cho YI, Arozullah AM, and Lee SD. Racial differences in medication adherence: a cross-sectional study of Medicare enrollees. *American Journal of Geriatric Pharmacotherapy*, 2010; 8(2):136-145. PMID: 20439063; PMCID: PMC3740123.
3. Kitsiou S, Pare G, Jaana M, **Gerber B**. Effectiveness of mHealth Interventions for Patients with Diabetes: An Overview of Systematic Reviews. *PLoS One*, 2017;12(3):e0173160. PMID: 28249025; PMCID: PMC5332111.
4. **Gerber BS**, Biggers A, Tilton JJ, Smith Marsh DE, Lane R, Mihailescu D, Lee J, Sharp LK. Mobile Health Intervention in Patients With Type 2 Diabetes: A Randomized Clinical Trial. *JAMA Netw Open*. 2023 Sep 5;6(9):e2333629. doi: 10.1001/jamanetworkopen.2023.33629. PMID: 37773498; PMCID: PMC10543137.

## B. Positions, Scientific Appointments, and Honors

### Positions and Scientific Appointments

2022 - Present	WOC, VA Bedford Healthcare System, Bedford, MA
2021 - Present	Division Chief, Health Informatics and Implementation Science Professor, Department of Population and Quantitative Health Sciences and Medicine, UMass Chan Medical School
2021 - Present	Professor of Medicine, Division of Academic Internal Medicine and Geriatrics, University of Illinois at Chicago (Adjunct)
2015 - 2021	Associate Chief for Scholarly Activities and Education, Division of Academic Internal Medicine and Geriatrics, Department of Medicine, University of Illinois at Chicago
2009 - 2021	Senior Faculty, Center for Management of Complex Chronic Care (CMC3) and Center of Innovation for Complex Chronic Healthcare (CINCCH), Jesse Brown VA Medical Center
2008 - 2015	Associate Professor of Medicine, Sections of General Internal Medicine and Health Promotion Research, University of Illinois at Chicago
2004 - 2008	Assistant Professor of Medicine, Sections of General Internal Medicine and Health

1999 - 2021 Promotion Research, University of Illinois at Chicago  
Volunteer Physician, Community Health and New Life Volunteering Society  
1998 - 2000 Clinical Instructor of Medicine, University of Illinois at Chicago

## Honors

2022 Fellow of American Medical Informatics Association  
2022 Association of Pakistani Physicians of New England Innovation in Digital Medicine Award  
2021 UI Health CARE Award 2021  
2018 Association for Information Systems Special Interest Group on Health Award  
2013 Association of Academic Psychiatrists Excellence in Research Writing Award  
2013 Faulkner Award, Diabetes Action Research and Education Foundation  
2011 Hispanic Center of Excellence Research Mentor of the Year  
2010 Institute for Health Research and Policy Fellow  
2010 Alpha Omega Alpha Faculty Teaching Award  
2002 National Center on Minority Health and Health Disparities Health Disparities Scholar  
1998 American Board of Internal Medicine Certification (Recertification in 2008 and 2018)  
1998 University of Michigan Internal Medicine Senior Research Project Award  
1995 Catherine Dobson Prize for Clinical Research Presentation  
1993 American Medical Informatics Association Student Competition, Finalist

## C. Contribution to Science

1. I developed "Living Well with Diabetes," a bilingual computer multimedia diabetes education program targeting African-American and Latinx populations. At the University of Illinois at Chicago, I conducted two randomized controlled trials using the program in the waiting room setting and found improvement in diabetes self-efficacy and perceived susceptibility to complications. The program has received recognition in various forms, including Canadian Diabetes Association Best Practices in Diabetes Education and the Discovery Health Channel.
  - a. **Gerber BS**, Brodsky IG, Lawless KA, Smolin LI, Arozullah AM, Smith EV, Berbaum ML, Heckerling PS, and Eiser AR. Implementation and evaluation of a low-literacy Diabetes Education Computer Multimedia Application. *Diabetes Care*, 2005; 28(7):1574-1580. PMID: 15983303.
  - b. Lawless K, Smolin L, **Gerber B**, Brodsky I, Girotti M, Pelaez L, and Eiser A. Diabetes and Your Eyes: A pilot study on multimedia education for underserved populations. *International Journal of Instructional Media*, 2005; 32(1):17-26.
  - c. Khan MA, Shah, S, Grudzien A, Onyejekwe N, Banskota P, Karim S, Jin J, Kim Y, and **Gerber BS**. A diabetes education multimedia program in the waiting room setting. *Diabetes Therapy*, 2011; 2(3):178-188. PMID: 22127826; PMCID: PMC3173596.
2. I designed, developed, and implemented an automated, 2-way text-messaging platform (*mytapp*, <https://mytapp.herokuapp.com>) utilized in over 15 health research studies to date. Through funding from NSF, we are adapting *mytapp* to create a virtual health coaching system that incorporates natural language processing, sentiment analysis, and imitation machine learning. Initial work includes the development of classification models to extract physical activity behavioral goals from dialog messages.
  - a. Gupta I, DiEugenio B, Ziebart B, Liu B, **Gerber B**, Sharp L, Davis R, Baiju A. Creating and Annotating a Corpus of Health Coaching Dialogue. *Widening Natural Language Processing*. June 1, 2018
  - b. Gupta I, DiEugenio B, Ziebart B, Liu B, **Gerber B**, Sharp L, Davis R, Baiju A. Towards Building a Virtual Assistant Health Coach. *IEEE International Conference on Healthcare Informatics (ICHI)*. June 4, 2018.
  - c. Gupta I, Di Eugenio B, Ziebart B, Liu B, **Gerber B**, Sharp L. Modeling Health Coaching Dialogues for Behavioral Goal Extraction. *IEEE International Conference on Bioinformatics and Biomedicine (BIBM)*:1188-1190.
  - d. Gupta I, Di Eugenio B, Ziebart B, Liu B, **Gerber B**, Sharp L. Goal summarization for human-human health coaching dialogues. *The Thirty-Third International Flairs Conference*. May 17-20, 2020.

3. I have collaborated on research to develop prediction models in the diagnosis of community acquired pneumonia and urinary tract infection. We were able to develop models that incorporate multiple sources of predictors, such as patient symptoms, physical exam findings, urinalysis results, and radiology exams. We found that inclusion of genetic algorithms can help optimize neural network algorithms.
  - a. Heckerling PS, **Gerber BS**, Tape TG, Wigton RS. Prediction of community-acquired pneumonia using artificial neural networks. *Medical Decision Making*, 2003; 23(2):112-21. PMID: 12693873.
  - b. Heckerling PS, **Gerber BS**, Tape TG, Wigton RS. Use of genetic algorithms for neural networks to predict community-acquired pneumonia. *Artificial Intelligence in Medicine*, 2004; 30:71-84. PMID: 14684266.
  - c. Heckerling PS, **Gerber BS**, Tape TG, Wigton RS. Selection of Predictor Variables for Pneumonia Using Neural Networks and Genetic Algorithms. *Methods of Information in Medicine*, 2005; 44(1):89-97. PMID: 15778799.
  - d. Heckerling PS, Canaris GJ, Flach SD, Tape TG, Wigton RS, **Gerber BS**. Predictors of urinary tract infection based on artificial neural networks and genetic algorithms. *International Journal of Medical Informatics*, 2007; 76(4): 289-296. PMID: 16469531.
  
4. We have experience conducting research involving health coaches and clinical pharmacists to support patients in diabetes self-management. This research includes a novel model of chronic disease care that focuses on medication adherence and intensification. We conducted two RCTs to evaluate this model in a population of African-American and Latinx patients with type 2 diabetes in Chicago.
  - a. **Gerber BS**, Rapacki L, Castillo A, Tilton J, Touchette DR, Mihailescu D, Berbaum ML, and Sharp LK. Design of a trial to evaluate the impact of clinical pharmacists and community health promoters working with African-Americans and Latinos with Diabetes. *BMC Public Health*, 2012;12(1):891. PMID: 23088168; PMCID: PMC3571948.
  - b. Ruggiero L, Riley BB, Hernandez R, Quinn LT, **Gerber BS**, Castillo A, Day J, Ingram D, Wang Y, and Butler P. Medical assistant coaching to support diabetes self-care among low-income racial/ethnic minority populations: randomized controlled trial. *West J Nurs Res*, 2014;36(9):1052-73. PMID: 24569698; PMCID: PMC4215797.
  - c. Rojas E, **Gerber BS**, Tilton J, Rapacki L, Sharp LK. Pharmacists' perspectives on collaborating with community health workers in diabetes care. *J Am Pharm Assoc*, 2015;55(4):429-33. PMID: 26161485; PMCID: PMC5549615.
  - d. **Gerber BS**, Biggers A, Tilton JJ, Smith Marsh DE, Lane R, Mihailescu D, Lee J, Sharp LK. Mobile Health Intervention in Patients With Type 2 Diabetes: A Randomized Clinical Trial. *JAMA Netw Open*. 2023 Sep 5;6(9):e2333629. doi: 10.1001/jamanetworkopen.2023.33629. PMID: 37773498; PMCID: PMC10543137.
  
5. Our research team identified differences in medication adherence by racial and ethnic groups. We obtained and analyzed medication refill data for public aid enrollees in Illinois as well as surveyed Medicare recipients on medication use. Our findings demonstrate lower adherence of ACEI and ARB use by African-Americans and Latinos receiving public aid in Illinois.
  - a. **Gerber BS**, Cho YI, Arozullah AM, and Lee SD. Racial differences in medication adherence: a cross-sectional study of Medicare enrollees. *American Journal of Geriatric Pharmacotherapy*, 2010; 8(2):136-145. PMID: 20439063; PMCID: PMC3740123.
  - b. Lora CM, Sokolovsky AW, Touchette DR, Jin J, Hu X, Gao W, and **Gerber BS**. ACE Inhibitor and ARB Medication use among Medicaid Enrollees with Diabetes. *Ethnicity and Disease*, 2013; 23(2):189-95. PMID: 23530300; PMCID: PMC3711220.
  - c. Syed ST, **Gerber BS**, Sharp LK. Traveling Towards Disease: Transportation Barriers to Health Care Access. *Journal of Community Health*, 2013;38(5):976-93. PMID: 23543372; PMCID: PMC4265215.
  - d. Syed ST, Sharp L, Yoonsang K, Jentleson A, Lora C, Touchette D, Berbaum M, Suda K, **Gerber BS**. Relationship between Patient Medication Adherence and Distance to their Pharmacies and Prescribers. *Pharmacotherapy*, 2016; 36(6):590-7. PMID: 27087250; PMCID: PMC4919160.

Complete List of Published Work in MyBibliography:

<http://www.ncbi.nlm.nih.gov/sites/myncbi/ben.gerber.1/bibliography/43040294/public/>