
BIOGRAPHICAL SKETCH

NAME: Kiefe, Catarina I

eRA COMMONS USER NAME (agency login): CKIEFE

POSITION TITLE: Chief Scientific Officer and Professor, Dept of Population and Quantitative Health Sciences

EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
University of Porto, Portugal	BS	01/1968	Mathematics
State University of New York at Stony Br	PHD	01/1973	Mathematics
University of California, San Francisco	MD	01/1983	Medicine

A. Personal Statement

I am currently Professor the Department of Population and Quantitative Health Sciences (PQHS) at the University of Massachusetts Medical School (UMMS), Chief Scientific Officer of PQHS and Inaugural Chair (2009-19) Emerita of PQHS. I stepped aside as Chair in 2019 to devote my full attention to developing the next generation of researchers while maintaining her own research program and moving PQHS's research profile to the next level. I am a clinical epidemiologist and researcher, recognized as a thought leader in implementation science and in cardiovascular epidemiology and outcomes and effectiveness research. I have always included health disparities issues in my research, as is reflected in my publications. I have been continuously funded as PI by NIH since 1993 on R01 and Center grants, including 5 large cluster-randomized pragmatic clinical trials. I was recently PI on TRACE-CORE, which not only produced significant new findings on transitional care for acute coronary syndromes, but also became a significant career launching-pad for multiple early stage investigators (see below)

Before moving to UMMS, I was was Professor of Medicine and Biostatistics and Director, Division of Preventive Medicine, at the University of Alabama at Birmingham (UAB). There, I was also founding Director for two outcomes and effectiveness research centers and was the founding PI of the successful UAB AHRQ T32, originally funded in 2003, and then competitively renewed under my leadership in 2008; and the founding Director of the VA's National Quality Fellowship Training Program's Birmingham VA site, a post-residency training program in quality of care research for physicians. Together we the then Chief of Cardiology at UMMS (Keaney), we successfully competed for the 1st cycle of the CVT32 that we are seeking to renew. I am also currently PI of the recently competitively renewed KL2, a career development institutional training grant for junior faculty, affiliated with our CTSA.

Over the course of my career I have mentored over 100 early stage investigators, including junior faculty, postdocs, graduate and medical students. Since arriving at UMMS 12 years ago, I have successfully mentored 10 doctoral level scientists; 8 of them have obtained R-level funding and two a K-award; all of them hold academic positions with strong commitment to continued research careers I have chaired 5 PhD dissertation committees, and was recently the primary research mentor for 3 Ph D students, all writing their dissertations on TRACE-CORE. I am enthusiastic about the Child Health Equity T32 fellowship application that is being submitted by Dr. Garg, and look forward to serving as a Mentor for future fellows.

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

R01MH112138

Boudreaux, Kiefe

09/05/16-06/30/21

A System of Safety (SOS): Preventing Suicide through Healthcare System Transformation

Goal: To study the implementation of best practice suicide-related care processes that embody the Zero Suicide Essential Elements of Care across emergency departments, inpatient medical and behavioral health units, and primary care and OB/GYN clinics associated with a large healthcare system.

Role: MPI

NIH /NHLBI T32 HL120823-04 Kiefe (PI) 08/01/14-07/31/21 (NCE)
Transdisciplinary Training in Cardiovascular Research *Competitive renewal impact score 18, likely funding*
The goals of this program are to train pre- and postdoctoral fellows in cardiovascular research that spans basic science to the T2+ translational arenas. Role: MPI (with Freedman)

NIH/NCATS: KL2TR001455 Kiefe (PI) 07/01/10-06/30/25
University of Massachusetts Center for Clinical and Translational Science Faculty Career Development Program
Junior faculty career development program with focus on physician-scientists: Role: PI

NIH/NCATS, UL1TR001453 Luzuriaga (PI) 07/01/10-06/30/25
Univ. of Massachusetts Center for Clinical and Translational Science
The UMCCTS has transformed the conduct of clinical and translational research by providing an "academic home" for all university clinical investigators. Dr. Kiefe serves as co-Director, T2 and T3 research.
Role: PI on KL2, investigator on BERD on BERD and Translational Workforce Development Cores

HHSN268201300025C/SB: 000501394-02, UAB Kiefe (PI) 09/31/18-08/01/23
Coronary Artery Risk Development in Young Adults (CARDIA)
Cohort study that has been following a biracial cohort of 5,115 whites and African-Americans 18-30 years in 1985-86.
Role: Chair of the CARDIA Publications and Presentations Committee. member of Steering, subcontract PI

R01 HL14911 NIH/NHLBI Rosal/Perez (MPIs) 09/30/19-08/28/24
PR-OUTLOOK: Puerto Rican Young Adults' Stress, Contextual, Behavioral and Cardiometabolic Risk
Cohort study of cardiometabolic risk in young adult residing in Puerto Rico
Role: Investigator

NIH: K12 Lemon/Houston (MPIs) 09/05/17-08/31/22
K12 Cardiopulmonary Implementation Science Scholars Program
New training program in implementation science, in partnership with UMass affiliates Baystate Health in Springfield, MA and the VAs in Bedford and Boston, MA.
Role: Investigator

NIH/NHLBI: R01 HL14911 NIH Rosal/Peres (MPIs) 09/30/19-08/28/24
PR-OUTLOOK: Puerto Rican Young Adults' Stress, Contextual, Behavioral and Cardiometabolic Risk
Catarina Kiefe, PhD, MD, Co-Investigator
Epidemiological cohort study cardiometabolic risk factors among young adults in Puerto Rico.

NIH/NCI 1U01CA261276-01 Moormann/Forrester (MPIs) 09/30/20-08/31/22
Enhancing racial and ethnic diversity in COVID-19 research participation through storytelling (COVIDstory)
Randomized controlled trial of enrollment in COVID serology studies using respondent-driven sampling
storytelling
Role: Co-I

U01 HL105268-04, NHLBI Kiefe (PI) 09/30/10-07/31/16
Transitions, Risks, and Actions in Coronary Events - Center for Outcomes Research and Design (TRACE-CORE). One of three Centers for Cardiovascular Outcomes Research across the nation. Consisted of two research projects and a strong training component to study transitions and quality of life after hospital discharge for an acute coronary syndrome. The training component included 4 early stage investigators (McManus, Saczynski, Anatchkova, Waring) all of whom subsequently obtained R-level funding and are pursuing successful academic careers. TRACE-CORE data are also the primary source for 7 doctoral dissertations.

Citations:

1. Kiefe CI, Williams OD, Bild DE, Lewis CE, Hilner JE, Oberman A. Regional disparities in the incidence of elevated blood pressure among young adults: the CARDIA study. *Circulation*. 1997 Aug 19;96(4):1082-8. PubMed PMID: [9286933](https://pubmed.ncbi.nlm.nih.gov/9286933/)
2. Kiefe CI, Williams OD, Lewis CE, Allison JJ, Sekar P, Wagenknecht LE. Ten-year changes in smoking among young adults: are racial differences explained by socioeconomic factors in the CARDIA study? *Am J Public Health*. 2001 Feb;91(2):213-8. PubMed PMID: [11211629](https://pubmed.ncbi.nlm.nih.gov/11211629/); PubMed Central PMCID: [PMC1446547](https://pubmed.ncbi.nlm.nih.gov/PMC1446547/)

3. Houston TK, Person SD, Pletcher MJ, Liu K, Iribarren C, Kiefe CI. Active and passive smoking and development of glucose intolerance among young adults in a prospective cohort: CARDIA study. *BMJ*. 2006 May 6;332(7549):1064-9 PMID: [16603565](#); PubMed Central PMCID: [PMC1458534](#)
4. Kiefe CI, Allison JJ, Williams OD, Person SD, Weaver MT, Weissman NW. Improving quality improvement using achievable benchmarks for physician feedback: a randomized controlled trial. *JAMA*. 2001 Jun 13;285(22):2871-9. PMID: [11401608](#)

B. Positions and Honors

Positions and Employment

1973 - 1975	Lecturer in Mathematics, University of California, Berkeley, CA
1975 - 1976	Assistant Professor of Mathematics, (Associate Professor 6/76), University of Porto, Portugal
1976 - 1979	Assistant Professor of Mathematics and Statistics, University of New Mexico, Albuquerque, NM
1986 - 1992	Assistant and Associate Professor of Clinical Medicine (tenured 1992), Department of Medicine, Baylor College of Medicine, Houston, TX
1993 - 2009	Associate Professor, then Professor (tenured), Department of Medicine, Division of Preventive Medicine, University of Alabama at Birmingham (UAB), Birmingham, AL
2001 - 2009	Chief, Division of Preventive Medicine, UAB, Birmingham, AL
2009 -	Adjunct Professor, Department of Medicine, UAB, Birmingham, AL
2009 -	Professor of Population and Quantitative Health Sciences (PQHS) and Medicine (secondary appointment), University of Massachusetts Medical School (UMMS)
2009 - 2019	Inaugural Chair, PQHS
2012 -	Inaugural Melvin S. and Sandra L. Cutler Chair, Biomedical Research
2019-	Inaugural Cahir Emerita, PQHS
2109-	Chief Scientific Officer, PQHS

Other Experience and Professional Memberships

1988 - 1992	Chief, General Internal Medicine Section, Ben Taub General Hospital
1992 -	Associate Chief of Medicine, Ben Taub General Hospital
1993 -	Senior Scholar, Lister Hill Center for Health Policy Research, UAB
1993 - 2005	Consultant Epidemiologist, Alabama Quality Assurance Foundation
1995 - 2000	Associate Editor, <i>Annals of Epidemiology</i>
1997 - 2001	Health Care Quality and Effectiveness Study Section, AHCPR
1998 -	Chair, Publications and Presentations Committee, Coronary Artery Risk Development in Young Adults (CARDIA) Study
1998 - 2000	VA Merit Review Subcommittee, Epidemiology
1998 - 2009	Founding Director, Center for Outcomes and Effectiveness Research and Education, UAB
2001 - 2009	Director, Division of Preventive Medicine, Department of Medicine, UAB
2002 - 2007	Founding Director, Deep South Center on Effectiveness, VAMC, Birmingham, AL
2005 - 2009	Standing member, Health Services Organization and Development Study Section,
2010 - 2014	Knowledge Translation Canada International Scientific Advisory Committee
2014 - 2018	Chair, Board of Directors, Meyers Primary Care Institute, Worcester, MA
2013 -	Chair, External Advisory Board, NIH Minority and Health Disparities Research Center, University of Alabama at Birmingham
2016-	Chair, External Advisory Board, Center for Health Policy Research, University of California Davis
2014 - 2018	Standing member, NHLBI Mentored Clinical and Basic Science (K08, K01, K23) Study Section
2020 -	Standing member, NLM BLR Study section
2006 -	Co-Editor-in-Chief, <i>Medical Care</i>

Selected Honors

1973	Fulbright Scholar for Graduate Studies, U.S.
1982	Alpha Omega Alpha Honor Medical Society, UCSF
1983	Academic Excellence Award, UCSF
1992	Fellow, American College of Physicians
1998	National Senior Quality Scholar, Veterans Health Administration
2001	The Max Cooper Award for Research Excellence, UAB Dept of Medicine
2006	Inaugural lecture in health services research, John F. Demakis

C. Contribution to Science (Selected from over 320 peer-reviewed publications) (Underlined=mentee)

1. **Racial disparities in cardiovascular disease.** I have studied racial disparities in risk factor profile, treatment, and outcomes of cardiovascular disease. I have contributed to our understanding of the relative importance of race/ethnicity and socioeconomic factors in these disparities.
 - a. Kiefe CI, Williams OD, Lewis CE, Allison JJ, Sekar P, Wagenknecht LE. Ten-year changes in smoking among young adults: are racial differences explained by socioeconomic factors in the CARDIA study? *Am J Public Health*. 2001 Feb;91(2):213-8. PubMed PMID: [11211629](#); PubMed Central PMCID: [PMC1446547](#)
 - b. Borrell LN, Jacobs DR Jr, Williams DR, Pletcher MJ, Houston TK, Kiefe CI. Self-reported racial discrimination and substance use in the Coronary Artery Risk Development in Adults Study. *Am J Epidemiol*. 2007 Nov 1;166(9):1068-79. PubMed PMID: [17698506](#)
 - c. Bey GS, Person SD, Kiefe CI. Gendered Race and Setting Matter: Sources of Complexity in the Relationships Between Reported Interpersonal Discrimination and Cardiovascular Health in the CARDIA Study. *J. Racial and Ethnic Health Disparities* 2020, Jan 14 <https://doi.org/10.1007/s40615-020-00699-6> [Epub ahead of print]. PMID: 31939080
 - d. Forrester SN, Zmora R, Schreiner P J, Jacobs D R Jr., Roger V L, Thorpe R J Jr., Kiefe, CI. Accelerated Aging: A Marker for Psychosocial Stress Resulting in Cardiovascular Events? *Social Science and Medicine – Popul Health*. *SSM Popul Health*. 2021 Jan 12;13:100733. doi: 10.1016/j.ssmph.2021.100733. eCollection 2021 Mar. PMID: 33532540

2. **Methods for measuring quality of healthcare delivery.** I have developed the Achievable Benchmarks of Care, a data-driven and transparent method to define benchmark levels of provider performance and demonstrated its efficacy in a cluster-randomized trial. The approach has disseminated nationally and internationally, and has been referenced by the Institute of Medicine and the US Public Health Service. I have also worked extensively in other aspects of measuring provider performance.
 - a. Spettell CM, Wall TC, Allison J, Calhoun J, Kobylinski R, Fargason R, Kiefe CI. Identifying physician-recognized depression from administrative data: consequences for quality measurement. *Health Serv Res*. 2003 Aug;38(4):1081-102. PubMed PMID: [12968818](#); PubMed Central PMCID: [PMC1360934](#)
 - b. Houston TK, Allison JJ, Sussman M, Horn W, Holt CL, Trobaugh J, Salas M, Pisu M, Cuffee YL, Larkin D, Person SD, Barton B, Kiefe CI. Culturally Appropriate storytelling to improve blood pressure: a randomized trial. *Annals of Internal Medicine*. 2011 Jan 18;154(2):77-84. PMID: [21242364](#)
 - c. McManus DD, Saczynski JS, Lessard D, Waring ME, Allison J, Parish DC, Goldberg RJ, Ash A, Kiefe CI. Reliability of Predicting Early Hospital Readmission After Discharge For An Acute Coronary Syndrome using Claims-Based Data. *Am J Cardiology* 2016 Feb 14; 117(4): 501-7 2015. PMID: [26718235](#); PubMed Central PMCID: [PMC4768305](#)
 - d. Santry HP, Strassels SA, Ingraham AM, Oslock WM, Ricci KB, Paredes AZ, Heh VK, Basalice HE, Rushing AP, Diaz A, Daniel VT, Ayturk MD, Kiefe CI. Identifying the fundamental structures and processes of care contributing to emergency general surgery quality using a mixed-methods Donabedian approach. *BMC Med Res Methodol*. 2020 Oct 2;20(1):247. doi: 10.1186/s12874-020-01096-7. PMID: 33008294

3. **Cluster randomized trials to implement healthcare delivery improvements.** I have been the PI or co-PI of 7 federally funded cluster-randomized to change healthcare provider practice, demonstrating the benefit of multi-factorial interventions and studied the relative contributions of approaches such as opinion leaders, data-driven performance feedback, or web-based interactive guidelines.
 - a. Berner ES, Baker CS, Funkhouser E, Heudebert GR, Allison JJ, Fargason CA Jr, Li Q, Person SD, Kiefe CI. Do local opinion leaders augment hospital quality improvement efforts? A randomized trial to promote adherence to unstable angina guidelines. *Med Care*. 2003 Mar;41(3):420-31. PubMed PMID: [12618645](#)
 - b. Houston TK, Richman JS, Ray MN, Allison JJ, Gilbert GH, Shewchuk RM, Kohler CL, Kiefe CI. Internet delivered support for tobacco control in dental practice: randomized controlled trial. *J Med Internet Res*. 2008 Nov 4;10(5):e38. PubMed PMID: [18984559](#); PubMed Central PMCID: [PMC2630831](#)
 - c. Sales AE, Tipton EF, Levine DA, Houston TK, Kim Y, Allison J, Kiefe CI. Are Co-Morbidities Associated with Guideline Adherence? The MI-Plus Study of Medicare Patients. *Journal of General Internal Medicine*. 2009 Sep 1. Nov;24(11):1205-10. Epub 2009 Sep 1. PMCID: [PMC2771234](#)

- d. Levine DA, Funkhouser EM, Houston TK, Gerald JK, Johnson-Roe N, Allison JJ, Richman J, Kiefe CI. Improving care after myocardial infarction using a 2-year internet-delivered intervention: the Department of Veterans Affairs myocardial infarction-plus cluster-randomized trial. Arch Intern Med. 2011 Nov 28;171(21):1910-7. PMID: [22123798](#)
4. **Epidemiology of cardiovascular risk factors and disease.** I have demonstrated the geographic variability of prevalence and incidence of hypertension (now accepted, but previously questioned and deemed attributable to variability in blood pressure measurement). I have also contributed to our understanding of the complex relationship between alcohol consumption and hypertension; the differential contribution of area-level vs. individual-level factors to the evolution of cardiovascular risk factors; and the epidemiology of hospital readmissions.
- a. Halanych JH, Safford MM, Kertesz SG, Pletcher MJ, Kim YI, Person SD, Lewis CE, Kiefe CI. Alcohol Consumption in Young Adults and Incident Hypertension: 20-Year Follow-up From the Coronary Artery Risk Development in Young Adults Study. American Journal of Epidemiology. 2010 Mar 1;171(5):532-9. Epub 2010 Jan 29. PMID: [PMC2842215](#)
- b. Levine DA, Lewis CE, Williams OD, Safford MM, Liu K, Calhoun DA, Kim Y, Jacobs DR, Kiefe CI. Geographic and Demographic Variability in 20-Year Hypertension Incidence: The CARDIA Study. Hypertension. 2011 Jan;57(1):39-47. Epub 2010 Dec 6. PMID: [21135358](#); PubMed Central PMCID: [PMC3057218](#)
- c. McManus DD, Saczynski JS, Lessard D, Waring ME, Allison J, Parish DC, Goldberg RJ, Ash A, Kiefe CI. Reliability of Predicting Early Hospital Readmission After Discharge For An Acute Coronary Syndrome using Claims-Based Data. Am J Cardiol 2016 Feb 14; 117(4): 501-7. PMID: PMC4768305
- d. Whitaker KM, Jacobs DR, Kershaw KN, Demmer RT, Booth JN, Carson AP, Lewis CE, Goff, DC, Lloyd-Jones DM, Gordon-Larsen P, Kiefe CI. Racial Disparities in Cardiovascular Health Behaviors: the CARDIA Study. Am J Prev Med. 2018 Jul;55(1):63-71. PMID: PMC6014889

Complete List of Published Work in MyBibliography:

<https://www.ncbi.nlm.nih.gov/myncbi/catarina.kiefe.1/bibliography/public/>