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## BIOGRAPHICAL SKETCH

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NAME: Garg, Arvin

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eRA COMMONS USER NAME (credential, e.g., agency login): agarg1

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POSITION TITLE: Professor of Pediatrics; Vice Chair of Health Equity, Department of Pediatrics; Associate Chief Quality Officer for Health Equity

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### EDUCATION/TRAINING

INSTITUTION AND LOCATION	DEGREE	Completion Date	FIELD OF STUDY
Johns Hopkins University, Baltimore, MD	BA	05/1994	Behavioral Biology
Boston University School of Medicine, Boston, MA	MD	05/1999	Medicine
Boston University School of Medicine, Boston, MA	MPH	05/1999	Social & Behavioral Sciences
University of Connecticut School of Medicine, Farmington, CT	Residency	06/2002	Pediatrics
Johns Hopkins University School of Medicine, Baltimore, MD	Postdoctoral	06/2008	Academic General Pediatrics

### A. Personal Statement

I am **Professor of Pediatrics and Vice Chair of Health Equity** at UMass Chan Medical School (UMass) and UMass Memorial Children's Medical Center. I also serve as **Associate Chief Quality Officer for Health Equity** at UMass Memorial Health, the second largest health system in Massachusetts. I am a practicing general pediatrician and provide medical care to low-income children. **My research focuses on social determinants of health (SDOH), healthcare services, and child poverty.** Specifically, my work to date has focused on developing, implementing, and assessing pediatric SDOH screening and referral interventions within the context of health care delivery. My publications have been cited in professional guidelines by the American Academy of Pediatrics and the American College of Physicians, the Centers for Medicare & Medicaid Services' (CMS) Accountable Health Communities project, and the recent reports on *Vibrant and Healthy Kids* and *Integrating Social Care into the Delivery of Health Care* from the Health and Medicine Division of the National Academy of Sciences. Overall, **I have authored over 70 publications and my work has been cited >2,500 times with >450 citations in 2020.**

My research has been continuously funded by the NIH since 2009. I received a Pathway to Independence (K99/R00) career development award which launched my research career. Since then, I have been successful in applying for NIH funding, and currently have R01 awards from the NICHD and NHLBI; I recently completed a R01 award from the NIMHD. I have gained important research skills by successfully administering projects (e.g., staffing, budget, research protections), collaborating with interdisciplinary researchers and community partners, applying for, and obtaining extramural funding, and disseminated findings in peer-reviewed publications and at local, national, and international meetings.

**My research career would not have been possible without the mentorship that I received during critical junctures in my career,** including fellowship, my first faculty position, my first R01 submission, and in the mid-career stage of my academic career. **I am committed to passing this forward to the next generation of health equity clinician-scientists and researchers.** I have mentored medical students, public health students, fellows, residents, and junior faculty both at my home institutions (including as an Assistant Dean for Student Affairs) and through my professional organizations. I have directly mentored three junior faculty members who have received their K23 research career development awards on their initial submission. I also love to teach and have received recognition from my learners and peers. Finally, I strongly believe in diversity and inclusion and the urgent need to have more leaders in medicine who are from multicultural backgrounds and have varied lived experiences. As a person of color, to date, I have not had a direct supervising leader who looks like me or is a person of color. I have therefore pushed myself to take on leadership positions to be a part of the solution. In summary, I am honored to be part of this incredible mentoring team.

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

**R01HL141774-01A1**

*Understanding and Addressing the Social Determinants of Health for Families of Children with Sickle Cell Anemia within Pediatric Hematology*  
NIH/National Heart, Lung, and Blood Institute (NHLBI)  
Garg/Kavanagh (MPIs), Role: MPI  
05/16/2019-02/28/2023

**R01HL141774-02S1**

*Understanding and Addressing the Social Determinants of Health for Families of Children with Sickle Cell Anemia within Pediatric Hematology Diversity Supplement*  
NIH/National Heart, Lung, and Blood Institute (NHLBI)  
Garg/Kavanagh/Long (MPIs), Role: MPI  
09/28/2020-02/28/2023

**R01HD090191**

*Implementing an Intervention to Address Social Determinants of Health in Pediatric Practices* NIH/Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)  
Garg (PI), Role: PI  
07/20/2017-01/30/2023

**R01MD007793**

*Reducing Socioeconomic Disparities in Health at Pediatric Visits*  
NIH/National Institute on Minority Health and Health Disparities (NIMHD)  
Garg (PI), Role: PI  
07/01/2014-03/30/2021

**PCS-2017C2-7588**

*KIDS FACE FEARS: Face-to-face vs Computer-Enhance Formats Pragmatic Study of Anxiety*  
PCORI  
Fortuna/Pincus (MPIs), Role: Co-Investigator  
07/01/2018-06/30/2021

**R18DK114701-01**

*ASCEND: Approaches to CHC Implementation of Social Determinants of Health data Collection and Action*  
NIH/ National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)  
Gold (PI); Role: Subcontract PI  
08/25/2017-07/31/2022

**R01MD011404**

*Bettering Asthma Care in Kids –Geographic Social Determinants Data to Understand Disparities*  
NIH/National Institute on Minority Health and Health Disparities (NIMHD)  
Heintzman (PI), Role: Consultant  
09/26/2017-06/30/2022

**No Number**

Valhalla and Overdeck Foundations *Evaluation of the Impact of the CenteringParenting (CP) Clinical Intervention on Kindergarten Readiness*  
Garg/Boynton-Jarrett (MPIs), Role: MPI  
07/01/2018-06/30/2020

**R40MC28315**

*Purposeful Parenting: Enhanced Anticipatory Guidance for the First Year of Life*  
Maternal and Child Health Bureau  
Bair-Merritt (PI), Role: Co-Investigator  
04/01/2015-03/31/2018

## **B. Positions, Scientific Appointments, and Honors**

### **Positions and Scientific Appointments**

2021-	Professor of Pediatrics, UMass Chan Medical School, Worcester, MA
2021-	Vice Chair of Health Equity, Department of Pediatrics, UMass Chan Medical School, Worcester, MA
2021-	Director, Program to Advance Training in Child Health Equity (PATH) Fellowship, UMass Chan Medical School, Worcester, MA
2021-	Associate Chief Quality Officer for Health Equity, UMass Memorial Health, Worcester, MA
2016-2020	Assistant Dean for Student Affairs, Boston University School of Medicine, Boston, MA
2015-2020	Associate Professor of Pediatrics, Boston University School of Medicine (BUSM), Boston, MA
2012-2013	Interim Fellowship Director, General Academic Pediatrics, BUSM, Boston, MA
2010-2015	Assistant Professor of Pediatrics, Boston University School of Medicine, Boston, MA
2008-2010	Instructor, Department of Pediatrics, Tufts University School of Medicine, Boston, MA
2004-2008	Fellow, Academic General Pediatrics, Johns Hopkins School of Medicine, Baltimore, MD
2002-2004	Pediatrician, Valley Pediatrics, Huntingdon Valley, PA
1999-2002	Resident, General Pediatrics, University of Connecticut School of Medicine, Hartford, CT

### **Other Experience and Professional Memberships:**

2020-	Member, APA Anti-Racism Task Force
2020-	Member, Pediatricians Against Racism and Trauma (PART) working group
2018-2020	Co-Chair of the APA Wellness and Resiliency Task Force
2017-2020	Member, APA Board of Directors
2017-2020	Chair, APA Healthcare Delivery Committee
2015-	Associate Editor, <i>Journal of Developmental and Behavioral Pediatrics</i>
2012-2018	Member of Board of Directors, Center for Community Health Education Research and Service
2012-2014	Member, APA Task Force on Childhood Poverty
2009-2014	Co-Chair for the Serving the Underserved Special Interest Group of the APA
2004-	Member, Academic Pediatric Association (APA)
2002-	Diplomate, American Board of Pediatrics

### **Honors**

2021	Bernard J. Tyson National Award for Excellence in Pursuit of Healthcare Equity, The Joint Commission and Kaiser Permanente
2021	Leonard P. Rome AAP CATCH Visiting Professorship
2019	Certificate of Achievement for perfect experience scores in physician communication and overall doctor rating for pediatrics in 2018
2018	Boston Combined Residency Program (BCRP) Faculty Teaching Honor Roll, recognized for being named one of the three best clinical teachers in the BCRP by at least one resident
2014	Clinical Teacher of the Year Award for the Pediatric Clerkship, Boston University School of Medicine
2011	Excellence in Teaching Award, Senior Class of Tufts University School of Medicine
2010	Pediatric Clinical Research Center Travel Award, Tufts Medical Center
2007	Society of Pediatric Research (SPR) Fellow Clinical Research Award
2007	Francis F. Schwentker Award Winner for Excellence in Research by House Staff and Fellows in the Department of Pediatrics, Johns Hopkins University School of Medicine
2006	Ambulatory Pediatric Association Young Investigator Grant award, Finalist
2006	Citation by the Pennsylvania American Academy of Pediatrics (AAP) chapter in Appreciation for Helping to Empower Pennsylvania Families to Live Smoke Free
2001	Citation for Outstanding Service Rendered as Scientific Presenter at the Connecticut American Academy of Pediatrics (AAP) Chapter Annual Meeting
1999	Delta Omega Society
1994	Phi Beta Kappa Society
1994	Curt P. Richter Award in Behavioral Biology

## C. Contributions to Science

- 1. Social Determinants of Health:** My primary area of research is focused on addressing the social determinants of health within the context of primary care. Although professional guidelines emphasize the need to address patients' social circumstances, few physicians routinely address these factors at visits. My publications, two of which discuss RCTs including one conducted in eight community health centers (CHCs), found that systematically addressing low-income families' unmet needs increased the discussion of these topics with pediatricians and increased families' receipt of referrals and community-based resources. These publications document the role that clinicians can play in addressing the social determinants within the delivery of primary care. By providing evidence and simple clinical approaches, this body of work has changed the standards of care for health supervision visits, particularly for vulnerable populations. My cluster RCT publication was named one of the Top Stories of 2015 by the New England Journal of Medicine (NEJM) *Journal Watch Pediatrics and Adolescent Medicine*. Two of my publications were cited in the \$157 million Centers for Medicare & Medicaid Services (CMS) Innovation Center Accountable Health Communities pilot project to test improving patients' health by addressing their social needs. My publications have also been cited in the American Academy of Pediatrics and the American College of Physicians' guidelines on poverty and social determinants in addition to two reports on promoting vibrant and healthy children and integrating social care into health care delivery systems from the National Academy of Sciences. I served as the Principal Investigator in each of the studies below.
  - a) **Garg A**, Butz AM, Dworkin PH, Lewis RA, Thompson RE, Serwint JR. Improving the management of family psychosocial problems at low-income children's well-child care visits: the *WE CARE* project. *Pediatrics*. 2007;120:547-558.
  - b) **Garg A**, Toy S, Tripodis Y, Silverstein M, Freeman E. Addressing social determinants of health at well-child care visits: a cluster RCT. *Pediatrics*. 2015;135(2):e296-304. PMID: PMC4306802
  - c) **Garg A**, Boynton-Jarrett R, Dworkin PH. Avoiding the unintended consequences of screening for social determinants of health. *JAMA*. 2016;316(8):813-4. DOI: 10.1001/jama.2016.9282.
  - d) **Garg A**, Cull W, Olson L, Boyd AF, Federico SG, Dreyer B, Racine AD. Screening and referral for low-income families' social determinants of health by US pediatricians. *Acad Pediatr*. 2019: S1876-2859(19)30252-9. DOI: 10.1016/j.acap.2019.05.125.
- 2. Research Mentoring:** In addition to the contributions described above, I mentored medical students and fellows on the medical home at my home institution. Our studies added to the evidence base for the impact of the medical home on child health, particularly for healthy children; we also demonstrated little correlation between two commonly used definitions for the medical home construct. We found socioeconomic and racial disparities in accessing a medical home along with income disparities in the association of the medical home with child health. Finally, we did not find an association with having a medical home attenuating the impact on unmet basic needs on health for low-income children. For these studies, I mentored learners in conducting secondary data analyses using a national dataset. I served as the senior investigator for these studies.
  - a) Long WE, Bauchner H, Sege RD, Cabral HJ, **Garg A**. The value of the medical home for children without special health care needs. *Pediatrics*. 2012; 129(1):87-98. PMID: PMC3357044
  - b) Anker B, Tripodis Y, Long WE, **Garg A**. Income disparities in the association of the medical home with child health? *Clin Pediatr (Phila)*. 2018; 57(7):827-834. DOI: 10.1177/0009922817733697
  - c) Webb R, Whitham A, Tripodis Y, Long WE, **Garg A**. Does parental report of having a medical home attenuate the negative association between unmet basic needs and health for low-income children? *Glob Pediatr Health*. (in press).
  - d) Diao K, Tripodis Y, Long W, **Garg A**. Socioeconomic and racial disparities in the parental perception and experience of having a medical home: 2007-2011-2012. *Acad Pediatr*. 2016;17(1):95-103. DOI: 10.1016/j.acap.2016.07.006.
- 3. Family Psychosocial Topics:** My earlier work aimed to study the impact of screening and discussion of family psychosocial topics (e.g., parental smoking, substance use, and social needs) at pediatric primary care visits on the parent-provider relationship. It also focused on elucidating pediatric clinicians' attitudes and behaviors towards addressing these topics. These studies demonstrated some key provider barriers to discussing family psychosocial topics at pediatric visits, the impact of training on providers' self-efficacy, and the positive association of discussion of substance use on the parent-provider relationship and behavior change. I served as the Principal Investigator in all of these studies.

- a) **Garg A**, Butz AM, Dworkin PH, Lewis RA, Serwint JR. Screening for basic social needs at a medical home for low-income children. *Clin Pediatr (Phila)*. 2009;48:32-36.
- b) **Garg A**, Serwint JR, Higman S, Kanof A, Schell D, Colon I, Butz AM. Self-efficacy for smoking cessation counseling parents in primary care. *Clin Pediatr (Phila)*. 2007;46:252-257.
- c) **Garg A**, Nelson CS, Burrell L, Sia C, Duggan AK. Association of substance use discussion by pediatric providers with the parent-provider relationship and maternal behavior change. *Clin Pediatr (Phila)*. 2010;49:240-248.
- d) **Garg A**, Dworkin PH. Applying surveillance and screening to family psychosocial issues: implications for the medical home. *J Dev Behav Pediatr*. 2011; 32(5):418-426. PMID: PMC3111883

**4. Maternal Mental Health and Unmet Social Needs:** These studies assessed the interplay between maternal mental health, unmet social needs (e.g., food insecurity), and social safety-nets, and have contributed to the field of maternal depression research. I served as the primary and senior investigator in these studies. Dr. Yorghos Tripodis and I utilized data from national cross-sectional and birth cohort data sets to conduct many of these studies.

- a) **Garg A**, Burrell L, Tripodis Y, Goodman E, Brooks-Gunn J, Duggan AK. Maternal mental health during children's first year of life: association with receipt of section 8 rental assistance. *Hous Policy Debate*. 2013;23(2):281-297.
- b) **Garg A**, Toy S, Tripodis Y, Cook J, Cordella N. Influence of maternal depression on household food insecurity for low-income families. *Acad Pediatr*. 2014;pii S1876-2859(14)00378-7.
- c) Toy S, Tripodis Y, Yang K, Cook J, **Garg A**. Influence of maternal depression on WIC participation in low-income families. *Matern Child Health J*. 2016;20(3):710-9. DOI: 10.1007/s10995-015-1871-2.
- d) **Garg A**, Toy S, Tripodis Y, Cook J, Cordella N. Ameliorating maternal depression and its harmful consequences for low-income families: primary care to the rescue? *Acad Pediatr*. 2016; 16(8):714-715. DOI:10.1016/j.acap.2016.08.003.

**Complete List of Published Work in MyBibliography:**

<https://www.ncbi.nlm.nih.gov/myncbi/arvin.garg.1/bibliography/public/>