

**BIOGRAPHICAL SKETCH**

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NAME: Taveras, Elsie M.

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

POSITION TITLE: Chief, General Academic Pediatrics & Director of Pediatric Population Health Management, Massachusetts General Hospital for Children; Professor of Pediatrics, Harvard Medical School; Associate Professor of Population Medicine, Harvard Medical School; Associate Professor of Nutrition, Harvard T. H. Chan School of Public Health

EDUCATION/TRAINING (Begin with baccalaureate or other initial professional education, such as nursing, include postdoctoral training and residency training if applicable. Add/delete rows as necessary.)

INSTITUTION AND LOCATION	DEGREE (if applicable)	Completion Date MM/YYYY	FIELD OF STUDY
New York University, New York, NY	BS	05/1993	Neuroscience
New York University School of Medicine, New York, NY	MD	05/1997	Medicine
Boston Combined Residency Program in Pediatrics, Boston, MA	Resident	06/2001	Pediatrics
Harvard Pediatric Health Services Research Fellowship, Boston, MA	Fellowship	06/2003	Health Services Research
Harvard School of Public Health, Boston, MA	MPH	06/2003	Clinical Effectiveness

**A. Personal Statement**

Elsie M. Taveras, MD, MPH, is Professor of Pediatrics and Associate Professor of Population Medicine at Harvard Medical School, and Associate Professor of Nutrition at Harvard School of Public Health. She is a board certified pediatrician, clinical epidemiologist, and an obesity researcher. She is the Chief of the Division of General Academic Pediatrics as well as the Director of Pediatric Population Health Management at Massachusetts General Hospital. She co-directs a multi-disciplinary pediatric obesity management clinic at Massachusetts General Hospital for Children. Dr. Taveras has extensive expertise in epidemiologic investigations into the early life origins of obesity, pediatrics, obesity prevention and treatment, examining racial/ethnic disparities, health services research, and direction of randomized trials. She has led several randomized controlled trials to prevent and manage obesity in different settings including primary care, homes, and communities. Her interventions have included use of health information technology applications for clinicians, remote and mobile technology-enabled health educators, motivational counseling, and linkages to community resources.

**B. Positions and Honors****Positions and Employment**

1997-2000	Resident in Pediatrics, Boston Combined Residency Program, Department of Medicine, Children's Hospital Boston and Department of Pediatrics, Boston Medical Center
2000-2001	Chief Resident in Pediatrics, Department of Pediatrics, Boston Medical Center
2001-2003	Harvard Pediatric Health Services Research Fellowship, Children's Hospital Boston
2003-2006	Instructor in Ambulatory Care and Prevention, Harvard Medical School
2006-2011	Assistant Professor in Population Medicine, Harvard Medical School
2006-2012	Assistant Professor in Pediatrics, Harvard Medical School
2011-	Associate Professor in Population Medicine, Harvard Medical School
2012-2016	Associate Professor in Pediatrics, Harvard Medical School
2012-	Associate Professor in Nutrition, Harvard T. H. Chan School of Public Health
2013-	Chief of General Pediatrics, Massachusetts General Hospital for Children

2013- Director of Pediatric Population Health Management, Massachusetts General Hospital for Children  
2017- Professor in Pediatrics, Harvard Medical School

### **Honors**

1997 Research Grant Award, Endowment for the Children of the City of Boston  
1998 Resident Research Grant Award, American Academy of Pediatrics  
2002-2004 NCMHD, Health Disparities Scholar, National Institute of Health, National Center on Minority Health and Health Disparities  
2003 Harold Amos Medical Faculty Development Award, Robert Wood Johnson Foundation  
2007 Scholars in Medicine Fellowship Award, Harvard Medical School  
2015 Ofer and Shelly Nemirovsky MGH Research Scholar Award, Massachusetts General Hospital

### **C. Contribution to Science**

1. A major focus of my research concerns determinants of childhood obesity throughout the lifecourse. I have published extensively on risk factors for childhood obesity in the pregnancy, infancy, and early childhood periods, and have led many influential studies on infant feeding, maternal-child feeding practices, accelerated infant weight gain, and insufficient sleep. My work relating insufficient sleep in early childhood with obesity and adiposity was the first to study this association in young children and has led to the recognition of sleep as an important factor in weight maintenance.
  - a. **Taveras EM**, Gillman MW, Peña MM, Redline S, Rifas-Shiman SL. Chronic Sleep Curtailment and Adiposity. *Pediatrics*. 2014;133(6):1013-1022. PMID: PMC4035591
  - b. **Taveras EM**, Rifas-Shiman SL, Belfort MB, Kleinman KP, Oken E, Gillman MW. Weight Status in the First 6 Months of Life and Obesity at 3 Years of Age. *Pediatrics*. 2009;123(4):1177-1183. PMID: PMC2761645
  - c. **Taveras EM**, Rifas-Shiman SL, Sherry B, Oken E, Haines J, Kleinman K, Rich-Edwards JW, Gillman MW. Crossing Growth Percentiles in Infancy and Risk of Obesity in Childhood. *Arch Pediatr Adolesc Med*. 2011;165(11):993-998.
  - d. **Taveras EM**, Berkey CS, Rifas-Shiman SL, Ludwig DS, Rockett HR, Field AE, Colditz GA, Gillman MW. Association of consumption of fried food away from home with body mass index and diet quality in older children and adolescents. *Pediatrics*. 2005;116(4):e518-e524.
  
2. A second focus of my research is to examine early life risk factors and the emergence of racial/ethnic disparities in childhood obesity prevalence. I received a R01 from the National Institute on Minority Health and Health Disparities (R01 MD003963), to examine novel, understudied risk factors for obesity including maternal experiences of stress, racism, and interpersonal violence. In 2010, I was senior author on a study showing increases in racial/ethnic disparities in severe childhood obesity in the US. In addition, I published a study showing racial/ethnic differences in early life risk factors for childhood obesity which was cited in the White House Task Force Report on Childhood Obesity and selected by the Robert Wood Johnson Foundation as one of the most influential studies of 2010.
  - a. **Taveras EM**, Gillman MW, Kleinman K, Rich-Edwards JW, Rifas-Shiman SL. Racial/ethnic differences in early-life risk factors for childhood obesity. *Pediatrics*. 2010;125(4):686-695. PMID:PMC3836212
  - b. Wang YC, Gortmaker SL, **Taveras EM**. Trends and racial/ethnic disparities in severe obesity among US children and adolescents, 1976-2006. *Int J Pediatr Obes*. 2011;6(1):12-20.
  - c. Dixon B, Pena MM, **Taveras EM**. Lifecourse Approach to Racial/Ethnic Disparities in Childhood Obesity. *Adv Nutr*. 2012;3(1):73-82. PMID: PMC3262618
  - d. **Taveras EM**, Gillman MW, Kleinman KP, Rich-Edwards JW, Rifas-Shiman SL. Reducing Racial/Ethnic Disparities in Childhood Obesity: The Role of Early Life Risk Factors. *JAMA Pediatr*. 2013;167(8):731-738. PMID: PMC3835398
  
3. Another focus of my research is translating observational epidemiology into intervention studies to prevent and manage obesity among young children and their families. I have served as Principal Investigator of several clinical, home, community, and systems-level intervention studies. Examples include: 1) *First Steps for Mommy and Me* which showed substantial healthful behaviors among intervention participants vs. control. 2) *Healthy Habits, Happy Homes* which successfully improved sleep and screen time habits and improved body mass index among children in the intervention. 3) *The STAR Study*, shown to improve the

growth trajectories to age 5 years. Using data from electronic medical records of about 1.6 million children from 42 healthcare systems within 9 Clinical Data Research Networks across the United States, we will address how big the effects of antibiotics on obesity are within subgroups of the population as well as get information on antibiotic prescribing in the first two years of life, then "virtually" follow these children to ages 5 and 10 years to see what their BMIs are, and how many of them are obese by clinical standards.

Role: Site PI

1OT2OD24612-01 Smoller, Weiss, O'Connor, Karlson, Murphy (Multiple-PI) 09/27/16-08/31/17

National Institutes of Health

New England Precision Medicine Consortium

The New England Precision Medicine Consortium includes Partners HealthCare System and its hospitals, Massachusetts General Hospital and Brigham and Women's Hospital, with Boston University and Boston Medical Center. The goal of this project is to enroll and engage a diverse cohort of 10,000 health system participant-partners who will contribute data and biospecimens to the Precision Medicine Initiative (PMI) Cohort Program to advance the future of precision medicine.

Role: Co-I

IH-1304-6739 Taveras (PI) 11/01/13-5/31/17

Patient-Centered Outcomes Research Institute

Improving Childhood Obesity Outcomes: Testing Best Practices of Positive Outliers

The goal of this use sequentially-conducted mixed methods study is to develop and test a system-level intervention that leverages clinical and community resources and addresses socio-contextual factors to improve obesity and family-centered outcomes. To achieve this goal, we will work with 6 pediatric practices of Harvard Vanguard Medical Associates, a large HCS in Massachusetts (MA).

Role: PI

### **Completed Research Support**

U18 DP003370 Land (PI) 09/30/11-09/29/16

Centers for Disease Control and Prevention - National Center for Chronic Disease Prevention and Health Promotion

Mass in Motion: Community-Clinical Partnership to Reduce Childhood Obesity

The MA Department of Public Health, in partnership with the Department of Population Medicine at Harvard Medical School and with the Harvard School of Public Health, will use this project to build on the existing coalitions in Mass in Motion and related obesity prevention initiatives to develop an integrated intervention strategy that could be replicated throughout the Commonwealth. This strategy will incorporate evidence-based interventions in primary health care (High Five for Kids program), child care, schools (Eat Well and Keep Moving), after school programs (Food and Fun), and the broader community to reduce or prevent increases in obesity among predominantly low-income 2-12-year-old children.

Role: Site PI

K12 HS022986 Finkelstein (PI) 08/01/14-07/31/16

Agency for Healthcare Research and Quality

Mentored Career Development for Child and Family Centered Outcomes Research

This career development (K12) will fund junior faculty members in any pediatric specialty to conduct mentored research and fulfill an individualized career development plan to promote patient centered outcomes research.

Role: Primary Mentor

U54 CA155626 Hu (PI) 07/28/11-05/31/16

National Institutes of Health-National Cancer Institute

Sleep Duration, Childhood Energy Balance, and Insulin Resistance in Adolescence

The goals of this study are two-fold. The first goal is to examine associations of sleep duration – a novel risk factor for obesity and metabolic dysfunction identified in the first wave of TREC projects – in infancy and childhood with adiposity and energy balance, and with the emergence of insulin resistance and other cancer-related biomarkers in early adolescence. We will carry out this part of the project within the well-characterized pre-birth cohort study, Project Viva.

Role: Project 1 PI

quality of childhood obesity care and improve children's body mass index over a 1-year follow up period. 4) *Mass in Motion Kids* (co-PI), an ongoing Childhood Obesity Research Demonstration Grant, is a whole-of-community intervention in two towns aiming to reduce the prevalence of obesity among 2-12 year old disadvantaged children. 5) *Connect 4 Health* is a large, ongoing, systems-level intervention that leverages clinical and community resources and addresses socio-contextual factors to improve obesity and family-centered outcomes among children ages 2-12 years.

- a. **Taveras EM**, Blackburn K, Gillman MW, Haines J, McDonald J, Price S, Oken E. First Steps for Mommy and Me: A Pilot Intervention to Improve Nutrition and Physical Activity Behaviors of Postpartum Mothers and Their Infants. *Matern Child Health J.* 2011;15(8):1217-1227. PMID: PMC3219434
- b. Haines J, McDonald J, O'Brien A, Sherry B, Bottino CJ, Schmidt ME, **Taveras EM**. Healthy habits, happy homes: randomized trial to improve household routines for obesity prevention among preschool-aged children. *JAMA Pediatr.* 2013;167(11):1072-1079.
- c. **Taveras EM**, Marshall R, Kleinman KP, Gillman MW, Hacker K, Horan CM, Smith RL, Price S, Sharifi M, Rifas-Shiman SL, Simon SR. Comparative Effectiveness of Childhood Obesity Interventions in Pediatric Primary Care: A Cluster-Randomized Trial. *JAMA Pediatr.* 2015;169(6):535-542.
- d. **Taveras EM**, Blaine RE, Davison KK, Gortmaker S, Anand S, Falbe J, Kwass J, Perkins M, Giles C, Criss S, Colchamiro R, Baidal JW, Land T, Smith L; MA-CORD Study Group. Design of the Massachusetts Childhood Obesity Research Demonstration (MA-CORD) Study. *Child Obes.* 2015;11(1):11-22. PMID:PMC4322791

**Complete List of Published Work in MyBibliography:**  
<http://www.ncbi.nlm.nih.gov/pubmed/?term=taveras+em>

#### **D. Research Support**

##### **Ongoing Research Support**

- |   |   |                   |
|---|---|-------------------|
| UG3 OD023253  | Camargo (PI)                            | 09/01/16-08/31/23 |
| National Institutes of Health   |   |                   |
| Airway microbiome and age 6y asthma phenotypes in 2 diverse multicenter cohorts   |   |                   |
| This project will extend the largest severe bronchiolitis cohort in the world and build on our local MARC-43 cohort of 120 healthy infants by adding 600 healthy infants from four diverse sites. We will 1) investigate the relation of the airway microbiome in early infancy to risk of age 6y asthma among infants with severe bronchiolitis and among healthy infants, 2) investigate the relation of longitudinal patterns of the airway microbiome to risk of childhood asthma in the two cohorts combined, and 3) examine if associations differ by asthma phenotype.   |   |                   |
| Role: Co-I  |   |                   |
| R01 DK107972  | Taveras, Davison, Redline (Multiple-PI) | 09/30/15-07/31/20 |
| National Institutes of Health-National Institute of Diabetes and Digestive and Kidney Diseases  |   |                   |
| Infant Sleep Patterns and Accelerated Growth Trajectories from Birth to 24 months   |   |                   |
| The goals of this study are to examine associations of infant sleep patterns with growth from birth to 24 months of age, feeding and neurobehavioral pathways linking adverse sleep patterns to early childhood obesity, and modifiable determinants of infant sleep patterns that will directly inform intervention design. We will carry out this project within a cohort of infants that will be recruited from a large newborn nursery in Massachusetts General Hospital (MGH) caring for over 3650 newborns/year and leverage the existing electronic health records from their pediatric primary care visits across the MGH health care system. Focusing on an ethnically and socio-economically diverse sample of newborns and their families, and using repeated actigraphic estimates of sleep and in-home observations. |   |                   |
| Role: Multiple-PI / Contact PI  |   |                   |
| R01 DK108200  | Davison (PI)                            | 09/25/15-07/31/20 |
| National Institutes of Health-National Institute of Diabetes and Digestive and Kidney Diseases  |   |                   |
| Empowerment as a Mechanism for Change in Childhood Obesity Prevention   |   |                   |
| The goal of the proposed study is to integrate and test the efficacy of the Communities for Healthy Living (CHL) intervention. Developed in collaboration with low-income parents using community-based participatory   |   |                   |

research, the CHL intervention engages parents as co-leaders and addresses life challenges beyond those typically targeted in obesity interventions.

Role: Co-I

K24 DK105989 Taveras (PI) 07/28/15-06/30/20

National Institutes of Health-National Institute of Diabetes and Digestive and Kidney Diseases

Patient Oriented Research and Mentorship in Childhood Obesity Disparities

This midcareer investigator award is needed to enable Dr. Taveras to protect time to mentor the junior faculty and fellows in her Division. She will continue developing the skills and infrastructure to enable younger investigators to develop along productive career trajectories. Dr. Taveras will also expand her research in the high-priority area of health disparities, focusing on ways to reduce obesity for poor and racial/ethnic minority children. The award will come at a critical stage in her career as she works to mentor and inspire a cadre of junior investigators committed to patient-oriented research in obesity and health disparities.

Role: PI

G2015-0007 Taveras (PI) 11/01/14-10/31/19

The Boston Foundation

Obesity Prevention in the First 1000 Days

The overall goal of this study is to reduce obesity risk and related racial/ethnic and socioeconomic disparities among families living in economically deprived settings by implementing and testing the First 1000 Days intervention. A Collective Impact initiative with stakeholders from key early life sectors will support the design of an intervention, starting in early pregnancy and lasting through the first 24 months postpartum to prevent excess weight gain among mothers, promote healthful growth among their offspring, and improve obesogenic behaviors in the family unit. The intervention will be delivered through four primary early life systems:

Obstetrics, Pediatric Primary Care, WIC, and HV programs.

Role: PI

CDRN-1306-04608 Mandl (PI) 04/01/14-10/13/18

Patient-Centered Outcomes Research Institute

Scalable Collaborative Infrastructure for a Learning Healthcare System (SCILHS)

The goal of this project is to create a clinical data research network to enable the selection of patient cohorts for clinical effectiveness research.

Role: Site PI

U18DP006259 Taveras, Land (Multiple-PI) 06/01/16-09/29/18

Centers for Disease Control and Prevention

Clinical-Community Approaches to Pediatric Weight Management: MA CORD 2.0

The overall goals of this study are to implement a new clinical-community intervention, theoretically grounded in the Integrated Clinical and Community Systems of Care Model, to address obesity through optimized screening and management known to be effective in STAR, e-Referrals developed by MDPH, Healthy Weight Clinics tested in MA CORD, and the YMCA's Healthy Weight and Your Child weight management program (originally known as MEND).

Role: Site PI

5 R25 HL126145-02 Beech (PI) 09/15/14-05/31/18

National Institutes of Health-National Heart, Lung, and Blood Institute

Historically Black Colleges and Universities (HBCU) PRIDE Program

The overarching goals of the award are to design, implement, and evaluate an evidence-based, culturally and environmentally-relevant research training and mentoring program specifically designed for under-represented minority (URM) early career faculty employed in Historically Black Colleges and Universities (HBCU).

Role: Mentor

OBS-1505-30699 Block (PI) 02/01/16-01/31/18

PCORI

PCORnet Obesity Observational Study: Short- and Long-term Effects of Antibiotics on Childhood Growth

The objectives of the proposed study are to assess the effects of different types, timing, and amount of antibiotic use in the first two years of life with body mass index (BMI) and obesity at ages 5 and 10 years and