

## Ryan Richard Ruff, PhD, MPH

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CONTACT INFORMATION	380 Second Avenue, Suite 300, Office 309 Department of Epidemiology & Health Promotion New York University College of Dentistry	<i>Voice:</i> (212) 998-9663 <i>E-mail:</i> ryan.ruff@nyu.edu <i>Web:</i> www.ryanruff.com
RESEARCH SUMMARY	Trained in epidemiology, quantitative methods, and education policy, I am interested in school-based health and the association between oral health and child development. Within the College I am director of the Biostatistics Core, which forms the bulk of my collaborative work.	
EDUCATION	<b>University of Virginia</b> , Charlottesville, VA USA PhD in Research, Statistics, & Evaluation, December 2009 BAMT in Education, May 2005  <b>Harvard University</b> , Cambridge, MA USA MPH in Epidemiology, May 2017  <b>Cambridge University</b> , Cambridge, UK MPhil in Education, July 2010	
HONORS AND AWARDS	2022 Fellow of the American College of Epidemiology 2021 Sigma Xi Scientific Honor Society 2021 Elected Fellow, New York Academy of Medicine 2020 Goddard Junior Faculty Fellowship 2020 Dean's Honor, NYU College of Dentistry (2020, 2018, and 2017) 2019 Selected as one of top five papers published in 2018 in BMC Oral Health 2018 Delta Omega Honor Society, New York University 2018 NYU Faculty Honoree, New York University 2017 Elected to Academy of Distinguished Educators, NYU College of Dentistry 2012 Distinguished Service Award, NYC Department of Health 2008 DuPont Fellow, University of Virginia 2007 Doctoral Fellowship, University of Virginia (2007 and 2006)	
ACADEMIC EXPERIENCE	<b>New York University College of Dentistry</b> , New York, NY <i>Associate Professor (tenure track)</i> <ul style="list-style-type: none"><li>• Director, Biostatistics Core, 2017 - Pres</li><li>• Director, MS Program in Clinical Research, 2017 - Pres</li></ul> <i>Assistant Professor (tenure track)</i> <i>Research Assistant Professor</i> <ul style="list-style-type: none"><li>• Statistics Unit Head, 2015-2017</li></ul> <b>New York University School of Global Public Health</b> , New York, NY <i>Associated Professor</i>	<b>2019 - Pres</b>    <b>2017 - 2019</b> <b>2014 - 2017</b>   <b>2014 - Pres</b>

	<i>Adjunct Associate Professor</i>	<b>2012 - 2014</b>
	<b>Uniformed Services University of the Health Sciences</b>	
	<i>Adjunct Associate Professor</i>	<b>2022 - Pres</b>
PROFESSIONAL EXPERIENCE	<b>Columbia University, Epidemiology &amp; Population Health Institute</b> , New York, NY	
	<i>Instructor</i>	<b>2012 - 2021</b>
	<b>New York City Department of Health</b> , New York, NY	
	<i>Director, Research &amp; Evaluation Unit</i>	<b>2011 - 2014</b>
	<b>New York City Department of Education</b> , New York, NY	
	<i>Director of Research &amp; Evaluation</i>	<b>2010 - 2011</b>
RESEARCH EXPERIENCE	<b>Funded Research - As Principal Investigator</b>	
	2022 - 2024 JSI22-1529, JSI Research & Training Institute and US Department of Health & Human Services, "Sustainability of a school-based caries prevention program" \$300,000.	
	2022 - 2023 JSI22-1529, US Department of Health & Human Services, "Situation analysis, planning and proposal for a statewide school-based cavity prevention program" \$50,000 (MPI)	
	2020 - 2022 #R56 DE028933, National Institute of Dental and Craniofacial Research, "The role of the oral microbiome in disparities in dental caries and responsiveness to caries prevention." \$517,296	
	2019 - 2020 #RA633, New York University Mega Grant Support Initiative, "The role of the oral microbiome in disparities in dental caries and responsiveness to caries prevention: A pilot study." \$15,000	
	2018 - 2024 #PCS160936724, Patient Centered Outcomes Research Institute, "Comparative effectiveness of school-based caries prevention for children: A cluster randomized pragmatic clinical trial." \$13,352,988 (MPI)	
	2017 - 2023 #R01 MD011526, National Institute on Minority Health and Health Disparities, "Statewide implementation and evaluation of a rural caries prevention program." \$3,617,644 (MPI)	
	2016 - 2018 #R03 DE025289, National Institute of Dental and Craniofacial Research, "Analysis of longitudinal data from a school-based caries prevention program." \$317,000	
	<b>As co-investigator or other role</b>	
	2015 - 2016 #R01 DE018729, National Institute of Dental and Craniofacial Research, "Quality of life in children with cleft." \$3,231,498 (Hillary Broder PI)	

- 2014 - 2015 #U24 MD006964, National Institute on Minority Health and Health Disparities, “Effectiveness and improvement of rural, school-based, caries prevention programs.” \$7,100,000 (Richard Niederman PI)
- 2013 - 2014 NYU Community and Translational Science Institute, “Understanding obesity among public housing residents in NYC: A community-based geospatial project.” \$35,000 (Dustin Duncan PI)
- 2013 - 2014 #71637, Robert Wood Johnson Foundation, “Assessing the impact of food restrictions under the Supplemental Nutrition Assistance Program on food choice by families.” \$170,000 (Chen Zhen PI)

#### Other research funding

- 2018 New Hampshire Women, Infants, and Children Pay for Prevention Program. Served as epidemiologist/biostatistician for program evaluation and reporting (\$9,125)
- 2017 New York City Department of Health and Mental Hygiene. Subject-matter expert regarding oral health data registry and survey system development (\$40,000)

#### Grants under review

- Submitted Improving clinician-scientist training through participatory, patient-centered, practice-based research, National Institute of Dental and Craniofacial Research (U01)
- Submitted Comparative effectiveness of school-based oral health programs and the impact on child development, National Institute of Dental and Craniofacial Research (R01)
- Submitted Optimization of school-based caries prevention programs: the CariedAway oral health collaborative, National Institute of Dental and Craniofacial Research (R01)

#### PUBLICATIONS

- [49] **Ruff RR**, Habib R, Barry-Godin T, Niederman R. School-based caries prevention and the impact on acute and chronic student absenteeism. medRxiv. 2022. 10.1101/2022.11.22.22282638
- [48] Choi M, Ibrahim F, **Ruff RR**, Giugliano T. Digital analysis of the dimensional change of irreversible hydrocolloid impression material with varying storage times. In press, Primary Dental Journal.
- [47] Ellis AW, Kosaraju A, **Ruff RR**, Miller CB, Francis JM, Vandewalle KS. Dental erosion as an indicator for gastroesophageal reflux disease. General Dentistry. 2022; 70(6).
- [46] **Ruff RR**, Barry-Godin T, Whittemore R, Small TM, Santiago-Galvin N, Sharma P. Severity of dental caries in New York City children receiving school-based prevention and the impact of SARS-CoV-2: Results from the CariedAway pragmatic trial. medRxiv. 2022. doi: 10.1101/2022.05.16.22275165
- [45] **Ruff RR**, Barry-Godin T, Niederman R. Non-inferiority of silver diamine fluoride for caries

prevention when applied by nurses compared to dental hygienists: Results from the CariedAway school-based clinical trial. medRxiv. 2022. doi: 10.1101/2022.05.09.22274845.

[44] **Ruff RR**, Barry-Godin T, Whittemore R, Niederman R. Non-inferiority of essential medicines for caries arrest and prevention in a school-based program: Results from the CariedAway pragmatic clinical trial. medRxiv. 2022. doi: 10.1101/2022.04.26.22274321.

[43] Dixit M, Louis LD, Basta-Lkjakic J, ... **Ruff RR**, Schaffler MB, Yakar S. Lifelong excess in GH elicits sexual dimorphic effects on skeletal morphology and bone mechanical properties. J Bone Miner Res. 2022; doi: 10.1002/jbmr.4699.

[42] **Ruff RR**, Barry-Godin T, Murray T, Niederman R. Silver diamine fluoride, atraumatic restorations, and oral health-related quality of life in children aged 5-13 years: Results from the Caried-Away school-based cluster randomized trial, BMC Oral Health. 2022; 22(125). doi: 10.1101/2021.04.19.21255478.

[41] **Ruff RR**, Monse B, Duijster D, Naliponguit E, Benzian H. School-based strategies to prevent tooth decay in a high-risk child population in the Philippines: Results of a longitudinal cohort study. Community Dentistry and Oral Epidemiology. 2022;00:1-9. doi: 10.1111/cdoe.12729.

[40] **Ruff RR**, Whittemore R, Grocheki M, Bateson J, Barry-Godin T. Silver diamine fluoride and oral-health related quality of life: A network meta-analysis. PLoS One. 2022; 17(2). doi: 10.1371/journal.pone.0261627

[39] **Ruff RR**. From Jomtien to Dakar: A quality assessment of Malawian Education for All policy, 1990-2010. EdArXiv. 2022. doi: 10.35542/osf.io/y5xfk.

[38] **Ruff RR**, Sierra MA, Xu F, Crystal Y, Saxena D. Predicting treatment nonresponse in Hispanic/Latino children receiving silver diamine fluoride for caries arrest: A pilot study using machine learning. Frontiers in Oral Health. 2021; 2:695759. doi: 10.3389/froh.2021.695759.

[37] Paul B, Sierra MA, Xu F, Crystal Y, Li X, Saxena D, **Ruff RR**. Microbial population shift and metabolic characterization of silver diamine fluoride treatment failure on dental caries. PLoS One. 2021; 16(3). doi: 10.1371/journal.pone.0242396.

[36] Aldosari MA, Bukhari OM, **Ruff RR**, Palmisano JN, Nguyen H, Douglass CW, Niederman R, Starr JR. Comprehensive, school-based preventive dentistry: program details and students' unmet dental needs. Journal of School Health. 2021; 91(9). doi: 10.1111/josh.13063

[35] Starr JR, **Ruff RR**, Palmisano J, Goodson JM, Niederman R. Longitudinal caries prevalence in a comprehensive, multi-component, school-based prevention program. Journal of the American Dental Association. 2021;152(3). doi: 10.1016/j.adaj.2020.12.005

[34] **Ruff RR**, Saxena D, Niederman R. School-based caries prevention and longitudinal trends in untreated decay: An updated analysis with Markov chains. BMC Research Notes. 2020;13(1). doi: 10.1186/s13104-020-4886-8.

[33] **Ruff RR**. Street-level research in public health nutrition: A cross-sectional study of dietary behavior in New York City. SAGE Research Methods Cases: Medicine & Health. 2020. doi: 10.4135/9781529709698.

[32] Khouly I, Pardinias-Lopez S, **Ruff RR**, Strauss FJ. Efficacy of growth factors for the treatment of peri-implant diseases: A systematic review and meta-analysis. Clinical Oral Investigations. 2020. 24(7):2141-2161. doi: 10.1007/s00784-020-03240-5

- [31] Qi L, Pushalkar S, Kamer A, Corby P, Mota R, Paul B, Guo Y, **Ruff RR**, Alekseyenko A, Li X, Saxena D. The influences of bioinformatics tools and reference databases in analyzing human saliva microbial community. *Genes*. 2020;11(878). doi: 10.3390/genes11080878.
- [30] Yang C, Crystal Y, **Ruff RR**, Niederman R. Quality appraisal of child oral health-related quality of life measures: A scoping review. *JDR Clinical & Translational Research*. 2020;5(2). doi: 10.1177/2380084419855636.
- [29] Huang S, **Ruff RR**, Niederman R. An economic evaluation of a comprehensive school-based caries prevention program. *JDR Clinical & Translational Research*. 2019;4(4):378-387. doi: 10.1177/2380084419837587.
- [28] **Ruff RR**. State-level autonomy in the era of accountability: A comparative analysis of Virginia and Nebraska education policy through No Child Left Behind. *Education Policy Analysis Archives*. 2019;27(6):1-31. doi: 10.14507/epaa.27.4013.
- [27] **Ruff RR**, Senthil S, Susser S, Tsutsui A. Oral health, academic performance, and school absenteeism in children and adolescents: A systematic review and meta-analysis. *J Am Dent Assoc*. 2019;150(2):111-121. doi: 10.1016/j.adaj.2018.09.023.
- [26] **Ruff RR**, Niederman R. Silver diamine fluoride versus therapeutic sealants for the arrest and prevention of dental caries in low-income minority children: Study protocol for a cluster randomized controlled trial. *Trials*. 2018;19(1):523. doi: 10.1186/s13063-018-2891-1.
- [25] **Ruff RR**. Total observed caries experience: Assessing the effectiveness of community-based caries prevention. *Journal of Public Health Dentistry*. 2018;78(4):287-290. doi: 10.1111/jphd.12284.
- [24] **Ruff RR**, Niederman R. School-based caries prevention, tooth decay, and the community environment. *JDR Clinical & Translational Research*. 2018;3(2):180-187. doi: 10.1177/2380084417750612.
- [23] **Ruff RR**, Niederman R. Comparative effectiveness of school-based caries prevention: A prospective cohort study. *BMC Oral Health*. 2018;18(1):53. doi: 10.1186/s12903-018-0514-6. (*Recognized as one of five "Highlights of 2018" published in journal*).
- [22] **Ruff RR**, Crerand CE, Sischo L, et al. Surgical care for school-aged youth with cleft: Results from a multicenter, prospective observational study. *The Cleft Palate-Craniofacial Journal*. 2018;55(8):1166-1174. doi: 10.1177/1055665618765776.
- [21] **Ruff RR**, Niederman R. Comparative effectiveness of treatments to prevent dental caries given to rural children in school-based settings: Protocol for a cluster randomized controlled trial. *BMJ Open*. 2018;8(4). doi: 10.1136/bmjopen-2018-022646.
- [20] **Ruff RR**, Sischo L, Chinn CH, Broder HL. Development and validation of the Child Oral Health Impact Profile - Preschool version. *Community Dental Health*. 2017;34(3):176-182. doi: 10.1922/CDH\_4110Ruff07.
- [19] Huang SS, **Ruff RR\***, Niederman R. The benefit of early preventive dental care for children. *JAMA Pediatrics*. 2017;171(9):918. doi:10.1001/jamapediatrics.2017.2066.
- [18] Broder HL, Crerand CE, **Ruff RR**, Peshansky A, Sarwer DB, Sischo L. Challenges in conducting multicenter, multidisciplinary, longitudinal studies in children with chronic conditions. *Community Dentistry and Oral Epidemiology*. 2017;45(4):1-6. doi: 10.1111/cdoe.12293.
- [17] Rajendra A, Veitz-Keenan A, Oliveira BH, **Ruff RR**, Wong MCM, Innes NPT, Radford J, Seifo

N, Niederman R. Topical silver diamine fluoride for managing dental caries in children and adults (Protocol). *Cochran Database of Systematic Reviews*. 2017;7. doi: 10.1002/14651858.CD012718.

[16] **Ruff RR**, Sischo L, Broder HL. Minimally important difference of the Child Oral Health Impact Profile for children with orofacial anomalies. *Health and Quality of Life Outcomes*. 2016;14(140). doi: 10.1186/s12955-016-0544-1.

[15] **Ruff RR**, Broder H, Sischo L. Resiliency and socioemotional functioning in youth receiving surgery for orofacial anomalies. *Community Dentistry and Oral Epidemiology*. 2016;44(4):371-80. doi: 10.1111/cdoe.12222.

[14] **Ruff RR**. The impacts of retention, expenditures, and class size on primary school completion in Sub-Saharan Africa: A cross-national analysis. *International Journal of Education Policy and Leadership*. 2016;11(8).

[13] **Ruff RR**, Ng J, Jean-Louis G, Elbel B, Chaix B, Duncan DT. Neighborhood stigma is associated with poor sleep health in a pilot study of low-income housing residents in New York City. *Behavioral Medicine*. 2016;44(1). doi: 10.1080/08964289.2016.1203754.

[12] Duncan DT, **Ruff RR**, Chaix C, Regan SD, et al. Perceived spatial stigma, body mass index, and blood pressure: A GPS study among low-income housing residents in New York City. *Geospatial Health*. 2016;11(2). doi: 10.4081/gh.2016.399

[11] **Ruff RR**. Sugar-sweetened beverage consumption is linked to global adult mortality through diabetes mellitus and adiposity-related diseases including cardiovascular disease and cancer. *Evidence Based Medicine*. 2015;20(6):223-4. doi: 10.1136/ebmed-2015-110267.

[10] **Ruff RR**, Zhen C. Estimating the effects of a calorie-based sugar-sweetened beverage tax on weight and obesity in New York City adults using dynamic loss models. *Annals of Epidemiology*. 2015;25(5):350-357. doi: 10.1016/j.annepidem.2014.12.008.

[9] **Ruff RR**, Adjoian T, Akhund A. Small convenience stores and the local food environment: An analysis of resident shopping behavior using multilevel modeling. *American Journal of Health Promotion*. 2015;30(3):172-180. doi: 10.4278/ajph.140326-QUAN-121.

[8] Yi SS, **Ruff RR**, Jung M, Waddell EN. Racial/ethnic residential segregation, neighborhood poverty and urinary biomarkers of diet in New York City adults. *Social Science and Medicine*. 2014;122:122-129. doi: 10.1016/j.socscimed.2014.10.030.

[7] Duncan DT, Regan SD, Shelley D, Day K, **Ruff RR**, Al-Bayan M, Elbel B. Using Global Positioning System (GPS) methods to study the spatial contexts of obesity and hypertension risk among low-income housing residents in New York City: A feasibility study. *Geospatial Health*. 2014;9(1):57-70.

[6] Miller-Archie SA, Jordan HT, **Ruff RR**, Chamany S, Cone JE, Brackbill RM, et al. Post-traumatic stress disorder and new-onset diabetes among adult survivors of the World Trade Center disaster. *Preventive Medicine*. 2014;66:34-38. doi: 10.1016/j.ypmed.2014.05.016

[5] Zhen C, Brissette I, **Ruff RR**. By ounce or by calorie: The differential effects of alternative sugar-sweetened beverage tax strategies. *American Journal of Agricultural Economics*. 2014;96(4):1070-1083. doi: 10.1093/ajae/aau052. Published online June 2, 2014.

[4] Day K, Loh R, **Ruff RR**, Rosenblum R, Fischer S, Lee K. Does bus rapid transit promote walking? An examination of New York City's Select Bus Service. *Journal of Physical Activity and*

Health. 2014;11(8):1512-1516. doi: 10.1123/jpah.2012-0382.

[3] **Ruff RR**, Akhund A, Adjoian T, Kansagra SM. Calorie intake, sugar-sweetened beverage consumption, and obesity among New York City Adults: Findings from a 2013 population study using dietary recalls. *Journal of Community Health*. 2014;39(6):1117-1123. doi: 10.1007/s10900-014-9865-3.

[2] **Ruff RR**, Rosenblum R, Fischer S, Meghani H, Adamic J, Lee KK. Associations between building design, point-of-decision stair prompts, and stair use in urban worksites. *Preventive Medicine*. 2013;60:60-64. doi: 10.1016/j.ypmed.2013.12.006.

[1] **Ruff RR**. School counselor and school psychologist perceptions of accountability policy: Lessons from Virginia. *The Qualitative Report*. 2011;16(5):1270-1290.

#### PAPERS IN PREPARATION

Poudel SB, Ruff RR, Yildirim G, Dixit M, et al. Growth hormone (GH)-induced arthropathy: lessons from the aged bovine-GH transgenic mice. Submitted, *American Journal of Pathology*.

Ruff RR, Niederman R. Silver diamine fluoride versus glass ionomer sealants for the longitudinal prevention of dental caries: Results from the CariedAway school-based cluster randomized pragmatic trial.

Ruff RR, Barry-Godin T. Seat-time requirements for non-surgical, minimally invasive treatments for dental caries applied in a pragmatic, school-based program.

Huang, S.S., R.R. Ruff, S. Wang, R. Niederman, and H.T. Gold. 2022. The impact of school-based caries prevention programs on health care system burden from dental needs among children during COVID-19: a NY Medicaid claims analysis.

Huang, S.S., S. Wang, R.R. Ruff, R. Niederman, and H.T. Gold. 2022. Do school-based caries prevention programs really treat the highest risk children? A NY Medicaid claims data analysis.

Huang, S.S., S. Wang, R.R. Ruff, R. Niederman, T. Barry-Godin and H.T. Gold. 2022. The Impact of Heterogeneity in Resource Use in School-Based Caries Prevention Programs on Implementation Decisions.

Comparison of Dimensional Changes of 3D Printed Provisionals with Varying Polymerization Times: An In Vitro Study.

Effect of Varying UV Polymerization Times on Fracture Load Of 3D-Printed Provisional

Barry Godín T, Whittemore R, Barry J, Ruff RR. The Impact of SARS-Cov-2: Longitudinal Analysis of insurekidsnow.gov Dental Providers in Bronx, New York

Barry Godín T, Whittemore R, Ruff RR. Developing a predictive model for school-based health center dental program (SBHC-D) success using the Consolidated Framework for Implementation Research (CFIR)

Ruff RR. Average school performance following the introduction of a school-based caries prevention program.

#### INVITED TALKS

ORAL  
PRESENTATIONS  
AND SYMPOSIA

- Jun 2023 Novel strategies for school-based preventive medicine: Lessons from the *CariedAway* pragmatic clinical trial. Invited speaker for the upcoming 29th Congress of the International Association of Paediatric Dentistry. Maastricht, the Netherlands.
- Sep 2022 Research and development in school-based health. Invited lecture given to the Medicine Grand Rounds speaker series, Vanderbilt University Medical Center, Division of Epidemiology. Nashville, TN, USA.
- Nov 2022 Building Sustainable, Effective School-Based Oral Health Programs. Oral Symposium, three abstracts accepted as senior author, one as first author titled “School-based caries prevention with minimally invasive treatments: Results from phase one of the CariedAway cluster randomized pragmatic trial”. Presented at the 2022 American Public Health Association Meeting, Boston, USA
- June 2021 Applications of machine learning in oral health: predicting treatment nonresponse in children receiving nonsurgical caries prevention. 9th International Conference on Methodological Issues in Oral Health Research, New York, USA
- Sep 2019 Measuring responsiveness to preventative treatments for dental caries: Towards a predictive model using machine learning (Ruff RR, Saxena D). Oral presentation given at the CED-IADR Oral Health Research Congress, Madrid, Spain
- June 2018 Applications of virtual reality in training oral and maxillofacial surgery techniques (Ruff RR). NYU Academy of Distinguished Educators teaching and learning club, New York, USA
- May 2018 Research to optimize school-based caries prevention (Ruff RR). Oral presentation given at the 8th International Conference on Methodological Issues in Oral Health Research, Hong Kong
- Oct 2017 Assessing additional options for school-based caries prevention (“Improving determinants of child development” Symposium). Presented at the IADR World Congress on Preventive Dentistry, New Delhi, India

SELECTED  
ABSTRACTS

- July 2021 Silver diamine fluoride, dental caries, and quality of life in low-income minority children: Results from the CariedAway school-based cluster randomized trial. IADR/AADR General Session
- Oct 2018 Should dental insurers implement comprehensive school-based caries prevention programs? (Huang S, Ruff RR, Niederman R). 41st Annual Meeting of the Society for Medical Decision Making
- Apr 2018 Development and validation of the Child Oral Health Impact Profile Preschool Version (Broder HL, Sischo L, Ruff RR, et al). 75th Meeting of the American Cleft Palate Craniofacial Association
- Apr 2017 Analysis of school-based caries prevention programs (Ruff RR). New York University Faculty Research Symposium, New York, USA
- Mar 2017 Patient-centered outcomes in periodontitis patients (Rego R, Russell S, Burukunte S, Ruff RR, et al). 95th General Session of the IADR, California, USA



Mar 2017	CariedAway: Outcomes of school-based caries prevention (Ruff RR, Niederman R). 95th General Session of the IADR, California, USA
Mar 2017	SDF for Caries Prevention in Primary Teeth: A systematic review (Oliveira B, Rajendra A, Keenan A, Ruff RR, Niederman R). 95th General Session of the IADR, California, USA
Feb 2015	Spatial stigma and drug use among low-income housing residents in NYC (Ruff RR, Duncan DT). New York City Epidemiology Forum, New York, NY
Sep 2014	Estimating the effects of sugar-sweetened beverage taxes on weight and obesity in NYC (Ruff RR, Zhen C). American College of Epidemiology annual meeting, Maryland, USA
Feb 2014	Dietary sources of sugar and drink-specific calorie intake in New York City Adults (Adjoian T, Ruff RR, Akhund A). New York City Epidemiology Forum

#### SERVICE & COMMITTEE ACTIVITIES

#### **New York University**

2021-Pres	University Graduate Program Committee
Spring 2018	College faculty representative, NYU Faculty Urban Research Day
2014-2016	Teaching fellow, Center for the Promotion of Research Involving Innovative Statistical Methodology (PRIISM)

#### **College**

2019-Pres	Faculty Council
2016-Pres	Director, MS Program in Clinical Research
2016-Pres	Director, Biostatistics Core
2017-Pres	Member, NYU Academy of Distinguished Educators
2018-2022	Member, Curriculum Committee
2016-Pres	Member, Graduate Council on Ethics and Professionalism
2016-2019	Member, Council on Humanitarianism and Culture Change
2017-2018	Mentor, Summer D1 Research Experience
2014-2015	Teaching and Learning Club
2014-2015	Statistics Unit Head, College of Dentistry and School of Nursing
2014-2016	Technology Enhanced Learning Committee (NYU SGPH)

#### **Department**

Fall 2022	Chair, Faculty Search Committee (tenure track)
Fall 2022	Chair, Faculty Search Committee (research track)
2020-Pres	Chair, Oral Health Epidemiology and Analysis Lab

Fall 2021	Faculty Search Committee
2019-2020	Planning Committee, 2020 Methodology in Oral Health Research Conference
Spring 2017	Faculty Search Committee
2015-2016	Chair, Curriculum Committee, MS Program in Clinical Research
2015-2016	Admissions Committee
2014-2015	Curriculum Committee

## Other

2011-2014	Surveillance and Epidemiology Unit, NYC Incident Command System
2010-2011	Member, NYC Department of Education Institutional Review Board

## Community & Professional Service

2022	Study Section, National Institute of Dental and Craniofacial Research. Review panel for Oral Health Data Analysis and Statistical Methodology Development and Analyses of Existing Genomics Data applications.
2022	Study Section, National Institute of Dental and Craniofacial Research. Special Grants Review Committee (DSR).
2021	Study Section, National Institutes of Health. Oral, Dental, and Craniofacial Sciences (ODCS). Musculoskeletal, Oral, and Skin Sciences IRG.
2017	Grant Reviewer, Oral Disease and Dental Health Review Committee, California Tobacco-Related Research Program (TRDRP). Content expert for oral disease epidemiology and biostatistics.
2014	Consulting, Fiji National University, for the 2014 Fijian Oral Health Survey. Sampling procedures, data management and analysis, and reporting for government release.

## REVIEWING & EDITORIAL

### Reviewer

PLOS One, BMJ Open, Preventive Medicine, JDR Clinical and Translational Research, BMC Oral Health, Journal of Public Health Dentistry, Community Dentistry & Oral Epidemiology, Evidence-Based Medicine, BMC Public Health, Journal of Clinical Periodontology, Journal of the American Dental Association, Medicine, International Dental Journal, Clinical Implant Dentistry and Related Research, Pediatrics, International Journal of Paediatric Dentistry, Education Policy Analysis Archives, American Journal of Preventive Medicine

### Editorial

JDR Clinical & Translational Research (Scientific Advisory Board, 2021-Present)

Medicine (Academic Editor, 2016-2019)

## MENTORING AND ADVISING

### Thesis or capstone supervisor

Analyzing the impact of prevention on new dental caries over time in schoolchildren with preexisting untreated decay: The Forsyth Study (Kajal Desai, MPH thesis - 2019)

The comparative performance and appropriateness of caries indices for use in oral epidemiology research: a prospective cohort example (Dhawani Shah, MPH thesis - 2019)

Intermittent fasting and oral health (Jillian Bateson, Furman University Undergraduate Capstone Project, 2019 - later admitted to dental school)

Factors related to periodontitis prevalence and dental care utilization in US Hispanic women with changes in progesterone and estrogen levels (Ifrah Choudhary, MPH thesis - 2017)

Periodontitis and the risk of psoriasis in the US population using the National Health and Nutrition Examination Survey, 2009-2012 (Zhen Li, Master of Science capstone in Clinical Research - 2016)

Public health interventions for obesity in New York City (M. Seamans, HRTIP Internship, NYC Department of Health and Mental Hygiene, 2013).

### **Mentoring**

Tamarinda J. Barry-Godin, DMD, MPH. Worked under my supervision as a post-doctoral associate on a PCORI-funded project. Later pursued DrPH at the Johns Hopkins University Bloomberg School of Public Health and joined department as Research Assistant Professor.

Rachel Whittemore, MPH. Worked under my supervision as clinical research coordinator, later pursued MPH in Sustainable Development and a certificate in data science.

Rashmi Shrestha, MS. Former student enrolled in the MS program in Clinical Research, later serving as adjunct lecturer under my supervision in the same program. Went on to enroll in the DrPH program at the NYU Global School of Public Health.

### **TEACHING & EDUCATIONAL ACTIVITIES**

#### **Courses Taught**

Epidemiology (MS), 1 semester

Scientific Writing (MS), 1 semester

Epidemiology of Dental Caries (DDS, "Diagnosis and Treatment of Oral Disease" course), 3 semesters

Biostatistics for Public Health (MPH/PhD/DDS), 12 semesters

Data Management using SAS I (MS), 3 semesters

Data Management using SAS II (MS), 3 semesters

Clinical Research Practicum I (MS), 3 semesters

Clinical Research Practicum II (MS), 3 semesters

Biostatistics I (MPH/PhD), 2 semesters

Biostatistics II (MPH/PhD), 2 semesters

Propensity Score Matching (Post-graduate), 6 summer sessions

Methods of Causal Inference (Post-graduate), 2 summer sessions

Survey Research (Post-graduate, co-taught), 1 summer sessions

Qualitative Data Analysis (PhD), 1 semester

#### **Educational Materials Developed**

*MS Program in Clinical Research*, 2016

In 2016 I was asked to assume the role of Director of the MS Program in Clinical Research in the department of Epidemiology and Health Promotion. In so doing, I evaluated and revised the program curriculum, moving from 50 credits to 30, updated all syllabi for new competencies and state requirements, and successfully applied for state approval. I am responsible for reviewing and admitting outstanding applicants and developing new educational materials each year including advertising and new program options, such as a dual MS/MS with Biomaterials and a joint BS/MS with the NYU College of Arts and Sciences.

*Biostatistics for Public Health, 2014*

In collaboration with the NYU Global Technology Service and the College of Global Public Health, I created a fully-online course in Biostatistics to be offered to students at CGPH, the College of Dentistry, and the School of Medicine. This project required creating a new syllabus, all educational materials (including lessons, datasets, problem sets, and lab sheets), writing lecture scripts, and recording professional-quality videos for use in the online classroom.

*Data Management II, 2014*

For Data Management II, I created a new syllabus with updated competencies and focused the core course on a set of skills necessary for students pursuing careers in Clinical Research. Development for this course included a new syllabus, writing new SAS code for every course module, and creating problem sets/projects for student assessment.

*Propensity Score Matching, 2012*

The PSM course is a fully online course using the Canvas Instructure framework. It is a five-module course on the theory and practice of causal inference and propensity scores to analyze epidemiologic data. Development included syllabus, lessons, lecture videos, datasets, laboratory problem sets, and worksheets.

*Causal Inference, 2011*

As part of the Columbia Epidemiology & Population Health Institute, I developed a 5-day, 30-hour course in Causal Inference methods. Modules for this course included theories of causal inference, difference in difference methodology, regression discontinuity designs, propensity score analysis, and instrumental variables. Development included syllabus, lessons, datasets, problem sets, and assignments.

MEMBERSHIP IN  
PROFESSIONAL  
ORGANIZATIONS

- American College of Epidemiology (Fellow)
- American Statistical Association, Statistics in Epidemiology Section
- American Educational Research Association
- American Public Health Association
- New York Academy of Medicine (Fellow)
- New York Academy of Sciences
- Cochrane Collaboration
- Previously the Society for Epidemiologic Research, the International Association for Dental Research, the American Dental Education Association, and the Royal Society of Public Health

SOFTWARE

- Statistical Packages: R, Stata, LISREL, AMOS, BUGS; SAS (rusty), SPSS.
- Applications: EpiMouth (built in R Shiny), L<sup>A</sup>T<sub>E</sub>X, R-Markdown, REDCap, N'Vivo, EndNote, JMP, common Windows database, spreadsheet, and presentation software