

Ryan Richard Ruff, PhD, MPH

CONTACT INFORMATION

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Division of Community Oral Health
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PROFESSIONAL SUMMARY

I am an epidemiologist and education researcher interested in school health. As PI of the PRISMS lab (Pragmatic Research for Innovative and Sustainable Medicine in Schools), I use pragmatic clinical trials and community-based participatory research to increase access to oral healthcare and improve child development. My current positions are tenured associate professor and Chief of the Division of Community Oral Health at the University of Pennsylvania School of Dental Medicine. I am also an adjunct professor at the Uniformed Services University of the Health Sciences. I have received approximately \$22MM in funding as Principal Investigator and my research has been published in leading journals including JAMA Pediatrics, JAMA Network Open, and the Education Policy Analysis Archives. I was named a fellow of the American College of Epidemiology in 2022.

EDUCATION

University of Virginia, Charlottesville, VA USA

PhD in Research, Statistics, & Evaluation, December 2009
BAMT in Education, May 2005

Cambridge University, Cambridge, UK

MPhil in Education Policy, July 2010

Harvard University, Cambridge, MA USA

MPH in Epidemiology, May 2017

HONORS AND AWARDS

2024 Cuspie Award, Scientific Paper of the Year
2022 Fellow of the American College of Epidemiology
2021 Sigma Xi Scientific Honor Society
2021 Fellow of the New York Academy of Medicine
2020 Goddard Junior Faculty Fellowship
2019 One of the top papers published in *BMC Oral Health*
2018 Delta Omega Honor Society, New York University
2018 Faculty Honoree, New York University
2017 Academy of Distinguished Educators, New York University
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

University of Pennsylvania School of Dental Medicine, Philadelphia, PA

Department of Preventive & Restorative Sciences

Division of Community Oral Health

Chief, Division of Community Oral Health

2026 - Pres

Associate Professor

2026 - Pres

Uniformed Services University of the Health Sciences		
<i>Adjunct Associate Professor</i>		2022 - Pres
New York University College of Dentistry , New York, NY		
Department of Epidemiology & Health Promotion		
<i>Associate Professor</i>		2019 - 2026
<i>Assistant Professor</i>		2017 - 2019
<i>Research Assistant Professor</i>		2014 - 2017
Director, Biostatistics Core (2017-2026), Director, MS Program in Clinical Research (2017-2026), Head of the Statistics & Data Unit (2015-2017)		
New York University School of Global Public Health , New York, NY		
<i>Associated Professor</i>		2014 - 2026
<i>Adjunct Associate Professor</i>		2012 - 2014
 PROFESSIONAL EXPERIENCE		
Columbia Epidemiology & Population Health Institute , New York, NY		
<i>Instructor</i>		2012 - 2021
New York City Department of Health , New York, NY		
<i>Director, Research & Evaluation Unit</i>		2011 - 2014
New York City Department of Education , New York, NY		
<i>Director of Research & Evaluation</i>		2010 - 2011
 RESEARCH EXPERIENCE		
Funded Research - As Principal Investigator		
2025 - 2030	R01 MD019938, National Institute on Minority Health and Health Disparities, “Making caries prevention SMART: Adaptive interventions for precision dental medicine in schools”. \$2,921,992	
2025 - 2027	R03 DE033776, National Institute of Dental and Craniofacial Research, “Improving the design and implementation of school-based oral health programs using secondary data analysis”. \$322,000	
2024 - 2026	PCS160936824-S, Patient-Centered Outcomes Research Institute (supplementary award). “Optimizing school-based oral health programs that use silver diamine fluoride.” \$394,472	
2018 - 2026	PCS160936824, Patient-Centered Outcomes Research Institute, “Comparative effectiveness of school-based caries prevention for children: A cluster randomized pragmatic clinical trial.” \$13,052,988 (dual-PI)	
2023 - 2024	JSI22-1529, JSI Research & Training Institute and NH Department of Health & Human Services, “Sustainability of a school-based caries prevention program.” \$249,022	

- 2023 - 2023 C38355GG, New York State Department of Health School-Based Dental Home Program (SBDHP), “CariedAway: A sustainable model for school-based dental programs in New York City.” \$250,000.
- 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
- 2017 - 2024 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

Funded Research - As Co-Investigator/Biostatistician

- 2025 - 2027 R56 DE035568, National Institute of Dental and Craniofacial Research, “Fibronectin modulation of oral cancer nociception” (Bhattacharya, PI)
- 2025 - 2030 K23 DE034496, National Institute of Dental and Craniofacial Research, “Defining TRPV4 contribution of Schwann cells to oral cancer pain” \$767,319 (Mulpuri, PI)
- 2025 - 2029 Solventum, “Clinical Evaluation of 3M Filtek™ Supreme Flowable Composites for Class IV and Veneers.” \$548,172 (Allen & Hirata, PIs)
- 2024 - 2025 R41 DE034627, National Institute of Dental and Craniofacial Research, “Zinc nanocrystals from zinc tetraammine fluoride for caries arrest and remineralization” \$297,714 (Saxena, PI)
- 2024 - 2028 R01 NS102722, National Institute of Neurological Disorders and Stroke, “Endosomal platforms for signaling pain” \$3,062,710 (Bunnett & Schmidt, PIs)
- 2024 - 2026 R01 DE031319, National Institute of Dental and Craniofacial Research, “A multi-center prospective cohort study of malignant transformation risk in oral epithelial dysplasia and cancer recurrence risk in oral squamous cell carcinoma” \$3,699,333 (McDevitt, PI)
- 2024 - 2026 RM1 DE033491, National Institute of Dental and Craniofacial Research, “Endosomal mechanisms signaling oral cancer pain” \$4,820,611 (Schmidt & Bunnett, PIs)
- 2024 - 2026 R01 CA231396, National Cancer Institute, “TRPV1 nociceptors in oral carcinogenesis and pain” \$3,101,649 (Albertson & Schmidt, PIs)
- 2024 - 2025 UG3 NS128148 (sub-award), National Institute of Neurological Disorders and Stroke, “Peripherally-restricted non-addictive cannabinoids for cancer pain treatment” \$301,369 (Spigelman, PI)

- 2024 - 2025 R01 DE029694, National Institute for Dental and Craniofacial Research, "Intra-tumor co-delivery of DNA and RNA to relieve cancer pain" \$2,905,693 (Schmidt & Yamano, PIs)
- 2024 - 2025 W81XWH-22-1, Department of Defense, "Receptors in endosomes mediate chronic pain associated with trauma and stress: Non-opioid targets for pain" \$936,199 (Schmidt, PI)
- 2024 - 2025 R01 CA228525, National Cancer Institute, "Artemin overexpression in oral cancer pain and carcinogenesis" \$2,567,300 (Albertson, PI)
- 2024 - 2025 R01 DE029951, National Institute for Dental and Craniofacial Research, "Targeting endosomal receptors for treatment of chronic pain". \$3,385,528 (Bunnett & Schmidt, PIs)
- 2024 - 2024 R01 DE026806 (NCE), National Institute of Dental and Craniofacial Research, "Protease PAR TRPV4 Axis and Oral Cancer Pain" \$3,917,007 (Schmidt & Bunnett, PIs)
- 2024 - 2024 R03 DE030996, National Institute of Dental and Craniofacial Research, "TRPA1 regulation of oral cancer nociception" \$317,000 (Bhattacharya, PI)
- 2023 - 2024 Solventum (3M), "Proposal for Clinical evaluation of injectable 3M Filtek supreme flowable composites for class IV cavities and veneers." \$30,000 (Allen & Hirata, PIs)
- 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 (Niederman, PI)
- 2015 - 2016 R01 DE018729, National Institute of Dental and Craniofacial Research, "Quality of life in children with cleft." \$3,231,498 (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 (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 (Duncan, PI)
- 2013 - 2014 RWJF71637, 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)

Funded Research - Other

- 2024 - 2025 "Validation of the Knowledge Related to Oral Health Literacy Scale (Spanish version)". NYU Biostatistics Core general project (\$1,000)
- 2024 - 2024 "Protocol development for Clinical Evaluation of 3M Filtek™ Supreme Flowable Composites Study". NYU Biostatistics Core general project (\$30,000)

- 2024 - 2024 "Dimensional Accuracy of Milled versus Printed Zirconia 4-unit Fixed Partial Denture Before and After Thermocycling - An in vitro study". NYU Biostatistics Core general project. (\$2,250)
- 2018 - 2018 New Hampshire Women, Infants, and Children Pay for Prevention Program. Served as epidemiologist/biostatistician for program evaluation and reporting (\$9,125)
- 2017 - 2018 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 The CareFLU Trial: CAREgiver-delivered FLUoride-Based Interventions to Improve Dental Health, Patient-Centered Outcomes Research Institute (Site PI)
- Submitted Novel Causal Inference Methods for Addressing Intercurrent Events in Dental Clinical Trials Using the Estimand Framework, National Institute of Dental and Craniofacial Research (Co-I, R01)
- Submitted Pragmatic Research to Implement Sustainable Medicine in Schools (PRISMS), Patient-Centered Outcomes Research Institute (PI)

PUBLICATIONS

- [71] WWOM IX Collaborative. A Scoping Review of Global Predoctoral Oral Medicine Education. Under Review.
- [70] WWOM IX Collaborative. A Consensus-Based Core Oral Medicine Curriculum for Predoctoral Dental Students. Under Review.
- [69] McRae MP, Rajsri KS, Vigneswaran N, Kerr AR, Redding S, Thornhill MH, Murdoch C, Speight PM, Bouquot J, Ruel N, Wolk R, **Ruff RR**, McDevitt JT. Deep learning single-cell analysis for cytologic evaluation of oral potentially malignant disorders. Under review.
- [68] **Ruff RR**, Barry Godín T, Huang S. The Building Adaptive School-based Interventions for Caries Study (BASICS): A Sequential, Multiple-Assignment, Randomized Trial. Under Review.
- [67] Huang SS, **Ruff RR**, Gold HT, Wang S. Do School-Based Caries Prevention Programs Successfully Recruit High Risk Populations? Introducing a Novel Linkage Between Medicaid Claims Data with Clinical Trial Data. Under review.
- [66] Spivakovsky S, **Ruff RR**. Development and validation of the Knowledge Related to Oral Health Literacy Scale, Spanish version (KROHL-S). Under review.
- [65] Giugliano TS, Witek L, Gomez de Carvahlo AB, Bottino M, **Ruff RR**, Choi M. Dimensional accuracy of milled versus printed 4-unit fixed partial denture before and after thermocycling: An in vitro study. Under review.
- [64] Barry Godín T, Shah R, Hawthorne G, **Ruff RR**. Treatment time for community caries prevention: A randomized clinical trial. medRxiv. doi: 10.1101/2024.07.11.24310 306.

- [63] **Ruff RR**. Transition probabilities for caries in children receiving silver diamine fluoride: A community-based randomized clinical trial. *Scientific Reports*. 2025;15(35982). doi: 10.1038/s41598-025-19829-3.
- [62] Godes C, Westhoff L, Barry Godín T, **Ruff RR**. Integrating silver diamine fluoride into school-based oral health programs: A pilot study. *Public Health Pract (Oxf)*. 2025;9. doi: 10.1016/j.puhip.2025.100609.
- [61] **Ruff RR**, Gawande AA, Xu Q, Barry Godín T. Silver diamine fluoride vs atraumatic restorations for managing dental caries in schools: a cluster randomized clinical trial. *JAMA Network Open*. 2025;8(6):e2513826. doi: 10.1001/jamanetworkopen.2025.13826.
- [60] Poudel SB*, Chlebek C*, **Ruff RR***, He Z, Xu F, Yildirim G, Hu B, De Jesus CL, Shinde AR, Nayak VV, Witek L, Bromage T, Neubert TA, Rosen CJ, Yakar S. Canagliflozin-induced adaptive metabolism in bone. *Diabetes*. 2025;74(5):812–826. doi: 10.2337/db24-0955. *Equal contribution.
- [59] Vader V, Kosaraju A, Gedge JL, Mitchell TM, **Ruff RR**, Vandewalle KS. Evaluating the Diagnostic Interrater Reliability between Virtual and In-person Sick-call Examinations at a Military Dental Treatment Facility. *Military Medicine*. 2025;190(5-6). doi: 10.1093/milmed/usae509.
- [58] Poudel SB, **Ruff RR**, He Z, Dixit M, Yidirim G, Jayarathne H, Manchanayake DH, Basta-Pljakic J, Duran-Ortiz S, Schaffler MB, Kopchick JJ, Sadagurski M, Yakar S. The impact of inactivation of the GH/IGF axis during aging on healthspan. *GeroScience*. 2024. doi: 10.1007/s11357-024-01426-3.
- [57] **Ruff RR**. Caries incidence in school-based prevention programs in the presence of interval censoring. *Children (Basel)*. 2024;11(11):1350. doi: 10.3390/children11111350.
- [56] **Ruff RR**, Barry-Godin T, Niederman R. Noninferiority of silver diamine fluoride vs sealants for reducing dental caries prevalence and incidence: A randomized clinical trial. *JAMA Pediatrics*. 2024;178(4):354-361. doi: 10.1001/jamapediatrics.2023.6770.
- [55] Poudel SB, **Ruff RR**, Yildirim G, Miller RA, Harrison DE, Strong RL, Kirsch T, Yakar S. Development of primary osteoarthritis during aging in genetically diverse UM-HET3 mice. *Arthritis Research & Therapy*. 2024;26(1):118. doi: 10.1186/s13075-024-03349-y.
- [54] **Ruff RR**, Niederman R. (2024). A School-Based Model for Minimally Invasive Dental Caries Prevention and Control: The CariedAway Pragmatic Randomized Trial. Patient-Centered Outcomes Research Institute (PCORI). doi: 10.25302/10.2024.PCS.160936824
- [53] **Ruff RR**, Niederman R. School-based caries prevention using silver diamine fluoride: A pragmatic randomized trial in low-income rural children. *medRxiv*. 2024. doi: 10.1101/2024.06.05.24308499.
- [52] **Ruff RR**, Barry-Godin T, Whittemore R, Small TM, Santiago-Galvin N, Sharma P. Unmet dental needs in children following suspension of school-based oral health services due to COVID-19. *J School Health*. 2024; 94(5):427-432. doi: 10.1002/JOSH.13433.
- [51] Poudel SB, Frikha-Benayed D, **Ruff RR**, Yildirim G, Dixit M, Korstanje R, Robinson L, Miller RA, Harrison DE, Strong JR, Schaffler MB, Yakar S. Targeting mitochondrial dysfunction using methylene blue or mitoquinone to improve skeletal aging. *Aging*. 2024;16(6):4948-4964. doi: 10.18632/aging.

- [50] Poudel SB, **Ruff RR**, Yildirim G, Dixit M, et al. Excess Growth Hormone Triggers Inflammation-Associated Arthropathy, Subchondral Bone Loss, and Arthralgia. *American Journal of Pathology*. 2023; 193(6):829-842. doi: 10.1016/j.ajpath.2023.02.010.
- [49] Yildirim G, Bergamo ETP, Poudel S, **Ruff RR**, et al. Effects of canagliflozin on skeletal morphology, bone mineral composition, and nano-mechanical properties in UM-HET3 mice. *GeroScience*. 2023; 45(3):1933-1951. doi: 10.1007/s11357-023-00803-8.
- [48] **Ruff RR**, Habib R, Barry-Godin T, Niederman R. School-based caries prevention and the impact on acute and chronic student absenteeism. *Journal of the American Dental Association*. 2023; 154(8):753-759. doi: 10.1016/j.adaj.2023.05.007.
- [47] **Ruff RR**, Barry-Godin T, Niederman R. Effect of silver diamine fluoride on caries arrest and prevention: the CariedAway school-based randomized clinical trial. *JAMA Netw Open*. 2023; 6(2). doi: 10.1001/jamanetworkopen.2022.55458.
- [46] **Ruff RR**, Barry-Godin T, Niederman R. The effectiveness of medical nurses in treating children with silver diamine fluoride in a school-based caries prevention program. *Community Dentistry & Oral Epidemiology*. 2023;52(4):398-405. doi: 10.1111/CDOE.12925.
- [45] Dixit M, Louis LD, Basta-Ljkjakic 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; 37(11). doi: 10.1002/jbmr.4699.
- [44] Choi M, Ibrahim F, **Ruff RR**, Giugliano T. Digital Analysis of the Dimensional Change Of an Irreversible Hydrocolloid Impression Material (Alginate) with Varying Storage Times. *Primary Dental Journal*. 2022; 11(4). doi: 10.1177/20501684221133417.
- [43] 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):46-51.
- [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;51(2):219-227. doi: 10.1111/cdoe.12729.
- [40] **Ruff RR**, Whittemore R, Grochek 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, Pardinas-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.
- [22] **Ruff RR**, Crerand CE, Sischo L, et al. Surgical care for school-aged youth with cleft: Re-

sults 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.

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[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.

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[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.
- [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.

INVITED TALKS

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| Oct 2025 | “Sustainable, personalized community prevention using pragmatic clinical trials”. Keynote speaker for the 3rd Annual Lecture Circus, University of Pennsylvania Levy Dental Medicine Library. Philadelphia, PA. |
| Sep 2025 | “Pragmatic clinical trials in community caries prevention”. Invited speaker for the “Pragmatic Clinical Trials, Systematic Reviews, and Advanced Methodological Approaches in Dental Research” symposium, 42nd Annual Meeting of the IADR Brazilian Division. Sao Paulo, Brazil. |
| May 2025 | “Component network meta-analysis: Disentangling effects from pragmatic clinical trials”. Invited speaker, 2025 Task Force on Design and Analysis in Oral Health Research Meeting. Newark, NJ. |
| Oct 2024 | “Pragmatic Research to Implement Sustainable Medicine in Schools”. Invited speaker, New York University School of Global Public Health. New York, NY |
| Oct 2024 | “Utilization of nurses for school-based caries prevention and control”. Invited speaker for the 2nd Annual Lecture Circus, University of Pennsylvania Levy Dental Medicine Library. Philadelphia, PA. |

ORAL PRESENTATIONS AND SYMPOSIA	Sep 2024	“Longitudinal caries management in schools: The CariedAway pragmatic randomized trial”. Invited speaker, Federal University of Santa Maria. Santa Maria, Brazil.
	Oct 2023	“The promise of engagement for school-based oral health”. Invited speaker for the 2023 Annual Meeting of the Patient-Centered Outcomes Research Institute, session “Practicalities of Conducting Meaningful Engagement: A Menu of Tips and Resources from Experience”. Washington, DC.
	Jun 2023	“School-based strategies to prevent dental caries in high-risk populations”. Invited speaker for the 29th Congress of the International Association of Paediatric Dentistry, session “Joining forces in prevention: Global initiatives for caries preventive programs”. Maastricht, the Netherlands.
	May 2023	Findings and implications from our 2023 paper in <i>JAMA Network Open</i> were presented by invitation to the Medicaid/Medicare/CHIP Services Dental Association (MSDA) Annual Symposium, Clinical Perspectives and Evidence Update session (team invitation). Washington, DC.
	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.
	Jun 2021	“Applications of machine learning in oral health: predicting treatment nonresponse in children receiving nonsurgical caries treatment”. Invited speaker for the 9th International Conference on Methodological Issues in Oral Health Research, New York, USA
	Oct 2017	“Assessing additional options for school-based caries prevention: Improving determinants of child development”. Invited speaker for the 11th IADR World Congress on Preventive Dentistry, New Delhi, India
	Jun 2023	CariedAway: One solution for a global disease. Oral presentation given at the 2023 National School-Based Health Care Conference, Washington, D.C., USA
	Jun 2023	Essential oral healthcare in a school context. Oral presentation given by invitation at the 2023 International Association for Dental Research (invited presentation, senior author), Bogotá, Colombia
	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
	Sep 2020	Silver diamine fluoride for school-based caries prevention. Oral presentation accepted at the PED-IADR Congress, Marseille, France (Conference cancelled due to COVID-19)
	Sep 2019	Measuring responsiveness to preventative treatments for dental caries: Towards a predictive model using machine learning. Oral presentation given at the CED-IADR Oral Health Research Congress, Madrid, Spain

	May 2018 Research to optimize school-based caries prevention. Oral presentation given at the 8th International Conference on Methodological Issues in Oral Health Research, Hong Kong
INTERNAL TALKS	Oct 2024 Pragmatic Research to Implement Sustainable Medicine in Schools (PRISMS): The CariedAway Project. New York University School of Global Public Health, Department of Epidemiology Seminar Series. New York, USA.
	Dec 2023 Adaptive interventions in support of personalized medicine. New York University Faculty Development Program, New York, USA.
	Jun 2018 Applications of virtual reality in training oral and maxillofacial surgery techniques. NYU Academy of Distinguished Educators Teaching and Learning seminar, New York, USA
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
	Apr 2018 Development and validation of the Child Oral Health Impact Profile Preschool Version. 75th Meeting of the American Cleft Palate Craniofacial Association
	Apr 2017 Analysis of school-based caries prevention programs. New York University Faculty Research Symposium, New York, USA
	Mar 2017 CariedAway: Outcomes of school-based caries prevention. 95th General Session of the IADR, California, USA
	Mar 2017 SDF for Caries Prevention in Primary Teeth: A systematic review. 95th General Session of the IADR, California, USA
	Feb 2015 Spatial stigma and drug use among low-income housing residents in NYC. New York City Epidemiology Forum, New York, NY
	Sep 2014 Estimating the effects of sugar-sweetened beverage taxes on weight and obesity in NYC. American College of Epidemiology annual meeting, Maryland, USA
	Mar 2014 An analysis of the bodega food environment in New York City. 24th Annual Art and Science of Health Promotion Conference, Denver, CO
	Feb 2014 Dietary sources of sugar and drink-specific calorie intake in New York City Adults. New York City Epidemiology Forum, New York, NY
	Aug 2013 By ounce or by calorie: The different effects of alternative sugar-sweetened beverage tax strategies (with C. Zhen). 2013 meeting of the Agricultural and Applied Economics Association, Washington, DC
	Jun 2013 Segregation, neighborhood poverty, and diet: Findings from a population-based survey of NYC adults (with S. Yi). 46th meeting of the Society for Epidemiologic Research, Boston, MA

PRESS & MEDIA
COVERAGE

Local and National

The Washington Post, Newsweek, Dentistry Today, Daily Mail, Semafor, Decisions in Dentistry,

Dr. Bicuspid, Dentistry IQ, The New York Post, Brooklyn Eagle, HealthDay, AAAS Newswire, Dimensions of Dental Hygiene, Interesting Engineering, US News & World Report, Drugs.com, SF Weekly, Princeton Daily Clarion, Contemporary Pediatrics, ADEA Bulletin, Parents Magazine. Television coverage in News 1, News 12 New York, NBC Boston, NBC Connecticut, Spectrum 1 (research site visit), NBC Right Now, WTRF CBS News 7 (West Virginia).

Global

Dental News (Pakistan), Bite Magazine (Australia), Asharq Al-Awsat (Egypt), Manchester Times (England)

Interviews

News 1 New York, ADHA Official Podcast, Broadcast Retirement Network

POLICY AND CLINICAL GUIDELINES

Our research has been used to inform local, national, and international policies for caries prevention, referenced by the Association of State & Territorial Dental Directors, the United States Preventive Services Taskforce, the Office of Public Health of Garfield, Colorado, and the National Guidelines for Use of Fluorides in Brazil.

TRADEMARKS & INTELLECTUAL PROPERTY

Trademarks

CariedAway, Secondary Innovator
PRISMS, Primary Innovator

TEACHING & EDUCATIONAL ACTIVITIES

Courses Taught

Biostatistics (PG), 1 semester
Epidemiology (MS), 1 semester
Scientific Writing (MS), 1 semester
Epidemiology of Dental Caries (DDS, “Diagnosis and Treatment of Oral Disease” course), 4 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

SERVICE & COMMITTEE ACTIVITIES

New York University

2024	Community-Engaged Scholarship Task Force
2023-Pres	Strategies to Reduce Inequality Research Working Group

- 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

- 2024-2026 Curriculum Committee
2019-2023 Faculty Council
2017-2023 NYU Academy of Distinguished Educators
2018-2022 Curriculum Committee
2016-Pres Director, MS Program in Clinical Research
2016-Pres Director, Biostatistics Core
2016-Pres Graduate Council on Ethics and Professionalism
2016-2019 Council on Humanitarianism and Culture Change
2017-2018 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)
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

National and International (Invitation Only)

- 2025 Community Roundtable on Addressing Sensory Health, Patient-Centered Outcomes Research Institute (Washington, DC)
- 2025 International Co-Investigator, National Institute of Science and Technology in Translational Biophotonics in Dentistry (Brazil).
- 2025 Study Section, NIH special emphasis review panel. Health Services and Systems (HSS) Review Branch.
- 2024 Virginia MCH-IOHI Alliance Member. Content expert in public health surveillance, analysis, and evaluation; sponsored by the Virginia Health Catalyst.
- 2024 Delphi Panelist for the ChatGPT, Generative Artificial Intelligence, and Natural Large Language Models for Accountable Reporting and Use (CANGARU) Project.
- 2024 Reviewer, Health Research Board of Ireland (HRB). Content expert for dental public health interventions and child development.
- 2023 World Workshop of Oral Medicine IX (WWOM). Project Consultant for Group 5: Predoctoral Oral Medicine Curriculum.
- 2023 Oral Health Disparities and Inequities (OHDI) Research Think Tank participant, National Institute of Dental and Craniofacial Research. Summary results published online at <https://www.nidcr.nih.gov/grants-funding/grant-programs/health-disparities-research-program/think-tank>
- 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 Consultant, Fiji National University, 2014 Fijian Oral Health Survey. Sampling procedures, data management and analysis, and reporting for government release.

**REVIEWING &
EDITORIAL**

Reviewer

International Journal of Epidemiology, JAMA Network Open, American Journal of Preventive Medicine, 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, BMJ Public Health, Journal of Clinical Periodontology, Journal of the American Dental Association, Medicine, International Dental Journal, Clinical Implant Dentistry and Related Research, Pediatrics, Journal of Evidence-Based Dental Practice, International Journal of Paediatric Dentistry, Education Policy Analysis Archives, Journal of American College Health, British Dental Journal, JADA Foundational Science, Contemporary Clinical Trials Communications, Public Health in Practice, American Education Research Association [AERA]

Open, British Dental Journal

Editorial

BMC Oral Health (Editorial Board, 2025-Present)

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

Medicine (Academic Editor, 2016-2019)

MENTORING AND ADVISING

Thesis or capstone supervisor

The effect of frequency of care in school-based oral health programs on caries incidence (Kiran Nagdeo, New York University School of Public Health doctoral capstone, 2025)

Intermittent fasting and dental caries: An analysis of the National Health And Nutrition Examination Survey (Mia Yu, Columbia University Department of Biostatistics Capstone, 2025)

Longitudinal caries management in schools: A randomized clinical trial (Aditi Gawande and Qianhui Xu, PRISMS Lab Graduate Research Assistants, 2024)

Screening and treatment time in school-based caries prevention (Gabriel Hawthorne and Radhika Shah, PRISMS Lab Graduate Research Assistants, 2024)

Data crosswalk for electronic health record software used in school-based caries prevention (Kristen He, Columbia University Department of Biostatistics Capstone, 2024)

School-based caries prevention and the impact on acute and chronic student absenteeism (Rami Habib, PRISMS Lab Graduate Research Assistants, 2023)

Silver diamine fluoride and oral health-related quality of life (Martyna Grochecki and Jillian Bateson, PRISMS Lab Graduate Research Assistants, 2022)

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)

A review of the literature on fasting and oral health (Jillian Bateson, Furman University Undergraduate Capstone Project, 2019)

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, HRTP Internship, NYC Department of Health and Mental Hygiene, 2013).

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: Society for Epidemiologic Research, International Association for Dental Research, American Dental Education Association, Royal Society of Public Health

SOFTWARE

- Statistical Packages: R, Stata, LISREL, AMOS, BUGS; SAS (rusty), SPSS.
- Applications: EpiMouth (built in R Shiny), L^AT_EX, R-Markdown, REDCap, N'Vivo, EndNote, JMP, common Windows database, spreadsheet, and presentation software