

**Natalie Riva Smith**  
Research Associate

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## EDUCATION

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2017 – 2021	PhD	Health Policy and Management: Decision Sciences Gillings School of Global Public Health, UNC Chapel Hill, NC
2015 – 2017	MS	Biostatistics Gillings School of Global Public Health, UNC Chapel Hill, NC
2011 – 2015	BS	Interdisciplinary Science (statistics and epidemiology) Purdue University, West Lafayette, IN

## POSITIONS & FELLOWSHIPS

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09/01/2023 –	Research Associate Department of Social and Behavioral Sciences, Harvard TH Chan School of Public Health, Boston, MA
02/01/2023 – 08/31/2023	Postdoctoral Research Fellow (Douglas Levy, Davene Wright, Kristen Hassmiller Lich, and Karen Emmons, mentors) Department of Social and Behavioral Sciences, Harvard TH Chan School of Public Health, Boston, MA
07/01/2022 – 06/30/2023	Pyle Research Fellow (Davene Wright, mentor) Department of Population Medicine, Harvard Pilgrim Health Care Institute, Boston, MA
09/01/2021 – 01/31/2023	NCI T32 Postdoctoral Fellow (Douglas Levy and Karen Emmons, mentors) Harvard Cancer Prevention Program, Harvard TH Chan School of Public Health, Boston, MA
05/01/2018 – 04/30/2021	NICHHD T32 Predoctoral Trainee (Leah Frerichs and James Moody, mentors) Biosocial Training Program, Carolina Population Center
2017 – 2018	Graduate Research Assistant (PI: Leah Frerichs) Department of Health Policy and Management, UNC Chapel Hill
2015 – 2017	Graduate Research Assistant (PI: Dianne Ward) Center for Health Promotion and Disease Prevention, UNC Chapel Hill

## AWARDS & HONORS

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2020	Harry T. Phillips Award for Outstanding Teaching by a Doctoral Student UNC Department of Health Policy and Management
2020	<i>Finalist</i> , HSRproj Research Competition for Students, AcademyHealth
2017	Delta Omega Public Health Honors Society, Theta chapter
2017, 2019	UNC Department of Health Policy and Management Travel award
2017	UNC Graduate School Travel award
2015	Interdisciplinary Science Outstanding Senior; College of Science Honors Convocation Awardee

## PUBLICATIONS

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### Peer-Reviewed Publications

<https://www.ncbi.nlm.nih.gov/myncbi/1BW2yjjMxfoQx/bibliography/public/>

1. **Smith, NR**, Levy, D. (2023). Budget impact analysis for implementation decision making, planning, and financing. *Translational Behavioral Medicine (in press)*.
2. **Smith, NR**, Hassmiller Lich, K, Ng, SW, Hall, MG, Trogdon, JG, Frerichs, L. (2023). Implementation costs of sugary drink policies in the United States. *Journal of Public Health Policy (in press)*.
3. Chriqui, J, Asada, Y, **Smith, NR**, Kroll-Desrosiers, A, Lemon, S. (2023). Advancing the Science of Policy Implementation: A Call to Action for the Implementation Science Field. *Translational Behavioral Medicine*, ibad034.
4. **Smith, NR**, Simone, M, Farrar-Muir, H, Granadeno, J, Young, J, Craddock, C, Moreland, J, Wallace, J, Frost, H, Sease, K, Hambidge, SM, Taveras, EM, Levy, D. (2023). Costs to implement a pediatric weight management program across three distinct contexts. *Medical Care*, 61(10):715–25. doi: 10.1097/MLR.0000000000001891.
5. **Smith, NR**, Frerichs, L, Grummon, AH, Wright, ST, Ng, SW. (2022). A scoping review of simulation models of sugary drink policies. (2022). *PLOS One*, 17(10), e0275270.
6. **Smith, NR**, Knocke, KE, Hassmiller Lich, K. (2022). Using decision analysis to support implementation planning in research and practice. *Implementation Science Communications*, 3(83).
7. Martinez, RA, Andrabi, N, Goodwin, AN, Wilbur, RE, **Smith, NR**, Zivich, PN. (2022). Conceptualization, operationalization, and utilization of race and ethnicity in major epidemiology journals 1995-2018: a systematic review. *American Journal of Epidemiology*, kwac146.
8. **Smith, NR**, Mazzucca, S, Hall, MG, Hassmiller Lich, K, Brownson, RC, Frerichs, L. (2022). Opportunities to improve policy dissemination by tailoring communication materials to the research priorities of legislators. *Implementation Science Communications*, 3(24).

9. Frerichs, L, **Smith, NR**, Kuhlberg, JA, Mason, G, Jackson-Diop, D, Stith, D, Corbie-Smith, G, Hassmiller Lich, K. (2020). Novel participatory methods for co-building an agent-based model of physical activity with youth. *PLOS One*, 15(11): e0241108.
10. **Smith, NR**, Zivich, P, Frerichs, L, Moody, J, Aiello, AE. (2020). A guide for choosing community detection algorithms in social network studies: The Question-Alignment approach. *American Journal of Preventive Medicine*, 59(4), 597-605.
11. **Smith, NR**, Grummon, AH, Frerichs, L. (2020). Demographic groups likely affected by regulating sugar-sweetened beverage portion sizes. *American Journal of Preventive Medicine*, 59(3), e135-e139.
12. **Smith, NR**, Zivich, PN, Frerichs, L. (2020). Social Influences on Obesity: Current Knowledge, Emerging Methods, and Directions for Future Research and Practice. *Current Nutrition Reports*, 9(1), 31-41.
13. Grummon, AH, **Smith, NR**, Golden, SD, Frerichs, L, Taillie, LS, Brewer, NT. (2019). Health Warnings on Sugar-Sweetened Beverages: Simulation of Impacts on Diet and Obesity Among US Adults. *American journal of preventive medicine*, 57(6), 765-774.
14. Frerichs, L, **Smith, NR**, Lich, KH, BenDor, TK, Evenson, KR. (2019). A scoping review of simulation modeling in built environment and physical activity research: Current status, gaps, and future directions for improving translation. *Health & place*, 57, 122-130.
15. Frerichs, L, **Smith, NR**, Lyden, J, Gaskin, K, Skinner, A, Armstrong, S. (2018). Weight-related quality of life and temperament as predictors and moderators of outcomes among treatment-seeking, low-income, ethnically diverse children with obesity. *Translational behavioral medicine*, 10(1), 244-253.
16. Linnan, L, Arandia, G, Bateman, LA, Vaughn, A, **Smith, N**, Ward, D. (2017). The health and working conditions of women employed in childcare. *International journal of environmental research and public health*, 14(3), 283.
17. **Smith, NR**, Ferraro, KF, Kemp, BR, Morton, PM, Mustillo, SA, Angel, JL. (2016). Childhood misfortune and handgrip strength among Black, White, and Hispanic Americans. *The Journals of Gerontology: Series B*, 74(3), 526-535.
18. **Smith, NR**, Jensen, BW, Zimmermann, E, Gamborg, M, Sørensen, TI, Baker, JL. (2016). Associations between birth weight and colon and rectal cancer risk in adulthood. *Cancer epidemiology*, 42, 181-185.
19. Jaff, DO, Aziz, TA, **Smith, NR**. (2015). The incidence of rotavirus and adenovirus infections among children with diarrhea in Sulaimani Province, Iraq. *Journal of Biosciences and Medicines*, 4(1), 124-131.

#### Non-Peer-Reviewed Publications

1. Asada Y, **Smith NR**, Kroll-Desrosiers A, Chriqui JF. (2022). Policy Implementation Science Research: NIH-Funded Case Examples and Lessons Learned. Bethesda, MD: Consortium for Cancer Implementation Science. Available: <https://consortiumforcanceris.org/public-goods.html>. DOI: 10.25417/uic.21257739.
2. Martinez, RA, **Smith, NR**, Wilbur, RE, Andrabi, N, Goodwin, AN, Zivich, PN. (2023). Threats to equity: Missing methodological details about race and ethnicity in health research. *Health Affairs Forefront*. DOI: 10.1377/forefront.20230310.613486

3. **Smith, NR**, Simone, M, Farrar-Muir, H, Granadeno, J, Young, J, Craddock, C, Moreland, J, Wallace, J, Frost, H, Sease, K, Hambidge, SM, Taveras, EM, Levy, D. (2022). Cost of Implementation Report for Dissemination and Implementation of Effective Childhood Obesity Treatment Innovations. Washington, DC: Patient-Centered Outcomes Research Institute (PCORI).

#### Papers In Progress

1. Persaud, A, **Smith, NR**, Lindros, J, Salmon, J, Ventura, G, Perkins, M, Taveras, EM, Fiechtner, L, Simone, M. Assessing the Market Viability of a Packaged Intensive Health Behavior and Lifestyle Treatment. (*under review*)
2. **Smith, NR**, Park, ER, Levy, D. Development and refinement of a tool to estimate the budget impact of implementing a smoking cessation intervention for cancer patients. (*in preparation*).
3. Martinez, RA., Wilbur, RE, Andrabi, N, Goodwin, AN, **Smith, NR**, Zivich, PN. Race and ethnicity in major medical journals 1995-2018: a systematic review. (*in preparation*)  
<https://www.medrxiv.org/content/10.1101/2022.03.07.22271661v1>

#### Book Chapters

1. Frerichs, L, **Smith, NR**. (2020). Designing Population Health Research Grounded in Complex Systems Science. in *Complex Systems and Population Health*. Apostolopoulos, Y., Hassmiller Lich, K., & Lemke, M.K. Oxford University Press.

## PRESENTATIONS

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#### Invited Presentations

1. **Smith, NR** and Wright, DR. (2023). Preferences on preferences. Patient Centered Outcomes Research Seminar Series, Ohio State University, May 19, 2023, online.
2. **Smith, NR**. (2023). Advancing population health by integrating decision, implementation, and dissemination science. Department of Population Medicine, Harvard Pilgrim Health Care Institute, April 13, 2023, hybrid.
3. **Smith, NR**. (2023). Development and evaluation of a tool to communicate complex cost information. The Mongan Institute Tobacco Research and Treatment Center, January 19, 2023, online.
4. **Smith, NR**. (2022). The best laid plans: Advancing public health through decision science approaches to implementation and dissemination. Department of Population Health at NYU Langone, December 7, 2022, in-person.
5. **Smith, NR**. (2022). Integrating decision science and implementation science to advance public health: Applications in simulation modeling and cost analyses, Health Economics group at Research Triangle Institute Health Solutions, November 28, 2022, online.
6. **Smith, NR**. (2022). Fitting the bill: Using decision science to inform the implementation of prevention programs and policies. Costs and Implementation Science Working Group, November 16, 2022, online.

7. **Smith, NR.** (2022). Coloring outside the lines: combining decision science and implementation science to prevent chronic disease. Division of Chronic Disease Research Across the Life Course, Department of Population Medicine, Harvard Pilgrim Health Care Institute, October 10, 2022, online.

#### Refereed Conference Presentations

1. **Smith, NR,** Grummon, AH, Hassmiller Lich, K, Ng, SW, Hall, MG, Frerichs, L. Including implementation considerations in simulation models: applications to US sugary drink taxes and health warning labels. *INFORMS Healthcare*. Toronto, Ontario, July 26-28, 2023.
2. Martinez, RA, Andrabi, N, Goodwin, AN, Wilbur, RE, **Smith, NR,** Zivich, PN, Aiello, AE, Hummer, RA. A cross-disciplinary systematic review of race and ethnicity in U.S. population health research. *Interdisciplinary Association for Population Health Sciences Annual Meeting*. Virtual due to COVID-19. Sept 30 - Oct 2, 2020.
3. Silva, R, Feng, A, **Smith, N,** Wunder, J, Evenson, KR. Direct and indirect health effects of urban natural environments – latest findings support benefits of urban parks. *American Public Health Association*, Philadelphia, Pennsylvania. 2019.
4. **Smith, NR,** Grummon, AH, Frerichs, L. Populations potentially affected by sugar-sweetened beverage portion size laws. *Interdisciplinary Association of Population Health Sciences Annual Meeting*. Seattle, Washington. Oct 1-4, 2019.
5. Grummon, AH, **Smith, NR,** Golden, SD, Frerichs, L, Taillie, LS, Brewer, NT. Dietary and weight loss benefits of a national sugar-sweetened beverage health warning policy: A microsimulation analysis. *American Society for Nutrition Annual Meeting*. Baltimore, Maryland. June 8-11, 2019.

#### Refereed Conference Posters

1. **Smith, NR,** Cruz, J.L., Gannon, J.G., Mazzucca-Ragan, S. Thinking beyond the model: Understanding the spectrum of benefits, challenges, and future needs of participatory systems science methods for implementation research. *16th Annual Conference on the Science of Dissemination and Implementation*. Arlington, Virginia. Dec 11-13, 2023.
2. Korn, AR, Cruz, JL, **Smith, NR,** Carney, M, Jacob, RR, Slater, W, Ramanadhan, S. Strategies for leveraging social networks in community-level dissemination and implementation research: a narrative review. *16th Annual Conference on the Science of Dissemination and Implementation*. Arlington, Virginia. Dec 11-13, 2023.
3. **Smith, NR,** Mazzucca, S, Hall, MG, Hassmiller Lich, K, Brownson, RC, Frerichs, L. Opportunities to improve policy dissemination by tailoring communication materials to the research priorities of legislators. *13th Annual Conference on the Science of Dissemination and Implementation*. Virtual due to COVID-19. Dec 15-17, 2020.
4. Knocke, K, **Smith, NR.** Where do we start? Methods for pre-implementation planning. *13th Annual Conference on the Science of Dissemination and Implementation*. Virtual due to COVID-19. Dec 15-17, 2020.

5. **Smith, NR**, Mazzucca, S, Hall, MG, Hassmiller Lich, K, Ng, SW, Frerichs, L. Identifying groups of policymakers with similar communication preferences to better tailor public health- and nutrition-related research communications. *Interdisciplinary Association for Population Health Sciences Annual Meeting*. Virtual due to COVID-19. Sept 30-Oct 2, 2020. **Poster award winner**.
6. Martinez, RA, Andrabi, N, Goodwin, AN, Wilbur, RE, **Smith, NR**, Zivich, PN, Aiello, AE, Hummer, RA. A systematic review of the use of race and ethnicity in U.S. medical research. *Interdisciplinary Association for Population Health Sciences Annual Meeting*. Seattle, Washington. Oct 1-4, 2019.
7. **Smith, NR**, Frerichs, L, Minyard, K, MacDonald Gibson, J, Hassmiller Lich, K. Bridging the research-to-policy gap using simulation modeling: Recommendations for building simulation models to support public health decision making. *AcademyHealth Annual Research Meeting*. Washington, DC. June 2-4, 2019.
8. **Smith, NR**, Frerichs, L, Minyard, K, MacDonald Gibson, J, Hassmiller Lich, K. (2019). Bridging the research-to-policy gap using simulation modeling: Recommendations for building simulation models to support public health decision making. *Biosocial Symposium*. Chapel Hill, North Carolina. May 13, 2019.
9. **Smith, NR**, Tate, D, Nieberg, R, Espeland, MA, Wing, RR. (2018). A 10-year cost-effectiveness simulation study of a novel approach to weight gain prevention in young adults: the SNAP intervention. *Interdisciplinary Association for Population Health Science Annual Meeting*. Washington, DC. Oct 3-5, 2018.
10. **Smith, NR**, Frerichs, L, Hassmiller Lich, K, Moody, J, Corbie-Smith, G, Aiello, AE. (2018). Associations between college students' and their peers' physical activity using peer social network measures. *Society of Behavioral Medicine Annual Conference*. New Orleans, LA. Apr 11-14, 2018.
11. Schiffenbauer, A, **Smith, N**, Rider, LG, Miller, FW. (2015). Tobacco Smoking in Different Racial Groups Is Differentially Associated with the Development of Myositis Autoantibodies and Interstitial Lung Disease in the Idiopathic Inflammatory Myopathies. *Arthritis & Rheumatology*, 67, 393-395.

## RESEARCH & TRAINING SUPPORT

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Pending

Active

02/01/2023 – 01/31/2028    NIH K99CA277135 (PI: Smith)  
*Developing and evaluating a decision support tool to disseminate tobacco control research and inform policy implementation*  
 Role: PI

Completed

09/01/2022 – 08/31/2023    The Implementation Science Center for Cancer Control Equity  
 (P50CA244433, Co-PIs: Karen Emmons and Elsie Taveras)

*Process benefits of participatory systems science methods for implementation research (pilot)*

Role: Co-PI with Dr. Stephanie Mazzucca-Ragan (Washington University in St. Louis)

07/01/2022 – 06/30/2023 Department of Population Medicine, Harvard Pilgrim Healthcare Institute  
Pyle Fellowship  
Role: Fellow

2022 PCORI IH-1304-6739 (PI: Taveras)  
Supplement, Estimating the Cost of Implementation for Dissemination and Implementation of Effective Childhood Obesity Treatment Innovations  
Role: Fellow

09/01/2021 – 01/31/2023 NIH T32 CA057711 (Co-PIs: Karen Emmons and Lindsay Frazier)  
Harvard Cancer Prevention Program, Harvard TH Chan School of Public Health, Boston, MA  
Role: Postdoctoral Research Fellow

05/01/2018 – 04/30/2021 NIH T32 HD091058 (Co-PIs: Allison Aiello and Bob Hummer)  
Biosocial Training Program, Carolina Population Center  
Role: Predoctoral Trainee

2020 UNC Department of Sociology Pilot Funds  
*Systematic review of the use of race in U.S. population health research 1995-2018*  
\$1,000  
Role: collaborator

## TEACHING EXPERIENCE

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11/01/2022 Guest Lecturer with Dr. Davene Wright – Preferences and tradeoffs in health insurance decisions  
Health Policy 2000: Core Course in Health Policy  
Instructor: Meredith Rosenthal

Spring 2020 & Spring 2021 Graduate Teaching Assistant  
HPM 883: Categorical Data Analysis  
Instructor: Marisa Domino

Spring 2021 Co-Instructor  
HPM 785: Advanced Decision Modeling  
Instructor: Kristen Hassmiller Lich

11/12/19, 11/14/19, 11/19/19 Guest Lecturer – Deterministic and probabilistic sensitivity analyses unit  
HPM 772: Techniques for the Economic Evaluation of Healthcare  
Instructor: Leah Frerichs

Summer 2017 Graduate Teaching Assistant  
HPM 611: Public Health Concepts and Systems Thinking  
Instructor: Leah Frerichs

2016 – 2017	Biostatistics Peer Tutor UNC Gillings Academic Enrichment Program in Biostatistics
Spring 2016 & Fall 2015	Graduate Teaching Assistant BIOS 600: Introduction to Biostatistics Instructor: Marcus Hermann-Giddens

## **SERVICE**

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2023 –	Vice Chair, Policy Implementation Science Working Group Cancer Consortium for Implementation Science
2023 –	Member, Society for Medical Decision Making Career Development Committee (Leads: Katherine Lofgren and Hailey Saunders)
2020 –	Member, Cost and Implementation Science Working Group (Facilitators: Heather T. Gold and Todd Wagner)
2022	Journal club facilitator, Summer Program to Advance Research Careers (SPARC)
2020 – 2022	Webinar Activities Co-Chair, Student Committee, Interdisciplinary Association for Population Health Science (two-year term)
2020 – 2022	Professional Development Committee, Interdisciplinary Association for Population Health Science (two-year term)
2021	Abstract reviewer, AcademyHealth Annual Meeting (Dissemination, Implementation, and Impact track)
2020	Abstract reviewer, Interdisciplinary Association for Population Health Sciences
2020	Session moderator, UNC master's presentations
2017 – 2020	Advisory Committee, Carolina Community Garden

Ad hoc reviewer for

Value in Health; Social Science and Medicine: Population Health; Journals of Gerontology  
Social Science; Translational Behavioral Medicine; Applied Clinical Informatics;  
Implementation Science Communications; Medical Care; International Journal of Behavioral  
Nutrition and Physical Activity

## **EXTRACURRICULAR TRAINING**

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2020 – 2021	US Policy Communication Training Program Population Reference Bureau (1-week training, yearlong practicum)
2019	Communicating Research Workshop UNC Chapel Hill (two-day workshop)
2018	Stochastic Network Modeling



University of Kentucky, LINKS Center for Social Network Analysis (1-week)

2018 Social Networks and Health  
Duke University, Duke Network Analysis Center (1-week)

### **PROFESSIONAL MEMBERSHIPS**

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2020 – Society for Medical Decision Making  
2018 – AcademyHealth  
2017 – Interdisciplinary Association for Population Health Science  
Past Population Association of America  
Past Society of Behavioral Medicine  
Past American Statistical Association

### **PRIOR EXPERIENCE**

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2016 Health Improvement Intern  
Association of State and Territorial Health Officials  
Crystal City, VA  
2015 Research Assistant  
North Central Nutrition Education Center for Excellence  
Purdue University, West Lafayette, IN  
2014 – 2015 Research Assistant  
Center on Aging and the Life Course  
Purdue University, West Lafayette, IN  
2013 Summer Intern  
National Institute of Environmental Health Sciences  
Bethesda, MD