

## Natalie Riva Smith

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### Education

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2017 – 2021	<b>PhD</b>	Health Policy and Management: Decision Sciences Gillings School of Global Public Health, UNC Chapel Hill, NC <i>Dissertation:</i> Promoting cost-effectiveness for public health policymaking: The case of sugar-sweetened beverages <i>Committee:</i> Leah Frerichs (chair), Kristen Hassmiller Lich, Justin Trogon, Marissa Hall, Shuwen Ng
2015 – 2017	<b>MS</b>	Biostatistics Gillings School of Global Public Health, UNC Chapel Hill, NC
2011 – 2015	<b>BS</b>	Interdisciplinary Science (statistics and epidemiology) Minors in biology and sociology Purdue University, West Lafayette, IN

### Major Research Interests

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- Projecting the health and economic impacts of public health policies using simulation models
- Integrating implementation science and economic evaluation
- Communicating simulation modeling and economic evaluation research to policymakers

### Professional Experience

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2021 – Present	<b>Postdoctoral Fellow</b> , Harvard Cancer Prevention Program (T32 CA057711) Harvard T.H. Chan School of Public Health
2018 – 2021	<b>Predocctoral Trainee</b> , Biosocial Training Program (T32 HD091058) Carolina Population Center, UNC Chapel Hill
2017 – 2018	<b>Graduate Research Assistant</b> (PI: Leah Frerichs) Department of Health Policy and Management, UNC Chapel Hill
2015 – 2017	<b>Graduate Research Assistant</b> (PI: Dianne Ward) Center for Health Promotion and Disease Prevention, UNC Chapel Hill

### Peer Reviewed Publications

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1. Frerichs, L., **Smith, N.R.**, Kuhlberg, J.A., 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 (2020): e0241108.

2. **Smith, N.R.**, Zivich, P., Frerichs, L., Moody, J., & Aiello, A.E. (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.
3. **Smith, N.R.**, Grummon, A.H., & Frerichs, L. (2020). Demographic groups likely affected by regulating sugar-sweetened beverage portion sizes. *American Journal of Preventive Medicine*, 59(3), e135-e139.
4. **Smith, N. R.**, Zivich, P. N., & 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.
5. Grummon, A. H., **Smith, N. R.**, Golden, S. D., Frerichs, L., Taillie, L. S., & Brewer, N. T. (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.
6. Frerichs, L., **Smith, N. R.**, Lich, K. H., BenDor, T. K., & Evenson, K. R. (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.
7. Frerichs, L., **Smith, N. R.**, 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.
8. Linnan, L., Arandia, G., Bateman, L. A., Vaughn, A., **Smith, N.**, & Ward, D. (2017). The health and working conditions of women employed in child care. *International journal of environmental research and public health*, 14(3), 283.
9. **Smith, N. R.**, Ferraro, K. F., Kemp, B. R., Morton, P. M., Mustillo, S. A., & Angel, J. L. (2016). Childhood misfortune and handgrip strength among Black, White, and Hispanic Americans. *The Journals of Gerontology: Series B*, 74(3), 526-535.
10. **Smith, N. R.**, Jensen, B. W., Zimmermann, E., Gamborg, M., Sørensen, T. I., & Baker, J. L. (2016). Associations between birth weight and colon and rectal cancer risk in adulthood. *Cancer epidemiology*, 42, 181-185.
11. Jaff, D. O., Aziz, T. A., & **Smith, N. R.** (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.
12. Schiffenbauer, A., **Smith, N.**, Rider, L.G., & Miller, F.W. (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.

## Book Chapters

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1. Frerichs, L & **Smith, N.R.** (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.

## Papers In Progress

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1. **Smith, N.R.**, Mazzucca, S., Hall, M.G., Brownson, R.C., & Frerichs, L. Opportunities to improve dissemination of health research by understanding research priorities of state legislators.
2. **Smith, N.R.**, Hassmiller Lich, K., Ng, S.W., Trogdon, J.G., & Frerichs, L. An approach to assess the costs of public health policies using implementation science and health economics.
3. Knocke, K, **Smith, N.R.**, & Hassmiller Lich, K. Where do we start? Methods for pre-implementation planning.
4. Martinez, R.A., Andrabi, N., Goodwin, A.N., Wilbur, R.E., **Smith, N.R.**, Zivich, P.N., Aiello, A.E., & Hummer, R.A. A systematic review of the use of race and ethnicity in U.S. medical research.
5. Zivich, P.N., Sumner, K.M., **Smith, N.R.**, & Aiello, A.E. The state of network analysis in main-stream epidemiology journals.

## Awards and 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
2015	Interdisciplinary Science Outstanding Senior; College of Science Honors Convocation Awardee

## Grants

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2020	UNC Department of Sociology Pilot Funds (collaborator role; \$1,000)
2019	UNC Department of Health Policy and Management Travel Grant (\$500)
2017	UNC Department of Health Policy and Management Travel Grant (\$500)
2017	UNC Graduate School Travel Grant (\$500)

## Teaching Experience

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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

Fall 2019	Guest Lecturer – Deterministic and probabilistic sensitivity analyses 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

### 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)

### Refereed Conference Presentations

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1. **Smith, N.R.**, Mazzucca, S., Hall, M.G., Brownson, R.C., & Frerichs, L. (2020). Opportunities to improve policy dissemination by tailoring communication materials to the research priorities of legislators. *Virtual poster presentation scheduled for the 2020 Dissemination & Implementation Science Annual Meeting, Dec 15-17.*
2. Knocke, K, & **Smith, N.R.** (2020). Where do we start? Methods for pre-implementation planning. *Virtual poster presentation scheduled for the 2020 Dissemination & Implementation Science Annual Meeting, Dec 15-17.*
3. **Smith, N.R.**, Mazzucca, S., Hall, M.G., Ng, S.W., & Frerichs, L. (2020). Identifying groups of policymakers with similar communication preferences to better tailor public health- and nutrition-related research communications. *Virtual poster presented at the 2020 Interdisciplinary Association for Population Health Sciences meeting, Sept 30-Oct 2. Poster award winner.*
4. Martinez, R.A., Andrabi, N., Goodwin, A.N., Wilbur, R.E., **Smith, N.R.**, Zivich, P.N., Aiello, A.E., & Hummer, R.A. (2020). A cross-disciplinary systematic review of race and ethnicity in U.S. population health research. *Virtual oral presentation at the 2020 Interdisciplinary Association for Population Health Sciences meeting, Sept 30 - Oct 2.*

5. Silva, R., Feng, A., **Smith, N.**, Wunder, J., & Evenson, K.R. (2019). Direct and indirect health effects of urban natural environments – latest findings support benefits of urban parks. *Oral presentation at the American Public Health Association annual meeting, Philadelphia, PA.*
6. **Smith, N.R.**, Grummon, A.H., & Frerichs, L. (2019). Populations potentially affected by sugar-sweetened beverage portion size laws. *Oral presentation at the Interdisciplinary Association of Population Health Sciences meeting, Oct 1-4, Seattle, WA.*
7. Martinez, R.A., Andrabi, N., Goodwin, A.N., Wilbur, R.E., **Smith, N.R.**, Zivich, P.N., Aiello, A.E., & Hummer, R.A. A systematic review of the use of race and ethnicity in U.S. medical research. *Poster presented at the Interdisciplinary Association for Population Health Sciences meeting, Oct 1-4, Seattle, WA.*
8. Grummon, A.H., **Smith, N.R.**, Golden, S.D., Frerichs, L., Taillie, L.S., & Brewer, N.T. (2019). Dietary and weight loss benefits of a national sugar-sweetened beverage health warning policy: A microsimulation analysis. *Oral presentation at the American Society for Nutrition Annual Meeting, June 8-11, Baltimore, MD.*
9. **Smith, N.R.**, 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. *Poster presented at the AcademyHealth Annual Research Meeting, June 2-4, Washington, DC*
10. **Smith, N.R.**, 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. *Poster presented at the first annual Biosocial Symposium, May 13, Chapel Hill, NC.*
11. **Smith, N.R.**, Tate, D., Nieberg, R., Espeland, M.A., & Wing, R.R. (2018). A 10-year cost-effectiveness simulation study of a novel approach to weight gain prevention in young adults: the SNAP intervention. *Poster presented at the Interdisciplinary Association for Population Health Science Annual Meeting, Washington, DC.*
12. **Smith, N.R.**, Frerichs, L., Hassmiller Lich, K., Moody, J., Corbie-Smith, G., & Aiello, A.E. (2018). Associations between college students' and their peers' physical activity using peer social network measures. *Poster presented at the Society of Behavioral Medicine Annual Conference, New Orleans, LA.*

## Service

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2021	Abstract reviewer, AcademyHealth Annual Meeting (Dissemination, Implementation, and Impact track)
2020 – Present	Blog Editorial Board, Interdisciplinary Association for Population Health Sciences
2020 – Present	Webinar Activities Co-Chair, Student Committee, Interdisciplinary Association for Population Health Sciences
2020	Abstract reviewer, Interdisciplinary Association for Population Health Sciences
2020	Session moderator, UNC master's presentations
2017 – Present	Advisory Committee, Carolina Community Garden

## Professional Memberships

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Present	AcademyHealth
Present	Interdisciplinary Association for Population Health Science
Present	Population Association of America
Present	Society for Medical Decision Making
Past	Society of Behavioral Medicine
Past	American Statistical Association

## Ad hoc Reviewer

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Value in Health; Social Science and Medicine: Population Health; Journals of Gerontology  
Social Science; Translational Behavioral Medicine

## Previous Research Experience

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2016	Health Improvement Intern Association of State and Territorial Health Officials
2015	Research Assistant North Central Nutrition Education Center for Excellence
2014 – 2015	Research Assistant Purdue Center on Aging and the Life Course
2013	Summer Intern National Institute of Environmental Health Sciences