

Catherine C. Pollack

Curriculum Vitae – November 2021

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EDUCATION

Dartmouth College, Geisel School of Medicine

PhD, Quantitative Biomedical Sciences (QBS)

Hanover, New Hampshire
2018 – Present

Dissertation: Balancing the Availability and Accuracy of Obesity-Related Health Information: Novel Data Science Methods to Combat Online Health Misinformation

Advisors: Diane Gilbert-Diamond, ScD & Tracy Onega, PhD

Dissertation Committee: Jennifer Emond, PhD, A. James O'Malley, PhD, & Soroush Vosoughi, PhD

University of Virginia, School of Engineering and Applied Sciences

B.S. with High Distinction, Biomedical Engineering

Interdisciplinary Major, Applied Statistics – Engineering Concentration

Charlottesville, Virginia
2014 – 2018

Capstone: Relational Database Applications for Functional Muscle Regeneration Analysis

Sociotechnical Thesis: Evaluating State Policies in Telemedicine

Advisors: Rider Foley, PhD & George Christ, PhD

PROFESSIONAL EXPERIENCE

Boston Children's Hospital

Graduate Research Fellow

Computational Epidemiology Lab, Innovation and Digital Health Accelerator

Remote
Spring 2021 – Present

COVID-19 Dispersed Volunteer Research Network

Research Scientist

Remote
Fall 2020 – Present

Dartmouth-Hitchcock Medical Center

Graduate Statistical Consultant

Biostatistics Consultation Core

Hanover, New Hampshire
Winter 2018 – Present

Expedia Group

Data Science Intern – Machine Learning Scientist
Cars and Activities Recommendations & Rankings,
Marketplace & Yield Data Science

Remote
Summer 2021

The COVID Tracking Project at *The Atlantic*

Science Communication Writer

Data Analyst

Remote
Fall 2020 – Spring 2021
Summer 2020 – Spring 2021

Redhorse Corporation

Data Science Intern

Remote
Summer 2020

National Academies of Sciences, Engineering, and Medicine

Intern

Board on Mathematical Sciences and Analytics &
Committee on Applied and Theoretical Statistics

Washington, D.C.
Summer 2017 – Summer 2018

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University of Virginia
Undergraduate Research Assistant
Department of Engineering and Society

Charlottesville, Virginia
Fall 2017 – Summer 2018

BOOK COLLABORATIONS

1. National Academy of Sciences (2018). *The Frontiers of Machine Learning: 2017 Raymond and Beverly Sackler U.S.-U.K. Scientific Forum*. Washington, D.C.: The National Academies Press. <https://doi.org/10.17226/25021>.

PEER-REVIEWED PUBLICATIONS

1. **Pollack, C.C.**, Onega, T., Emond, J.A., Vosoughi, S., O'Malley, A.J., McClure, A.C., Rothstein, R.I., & Gilbert-Diamond, D. A National Evaluation of the Geographic Accessibility and Provider Availability of Obesity Medicine Diplomates within the United States Between 2011 and 2019. Accepted to *International Journal of Obesity*.
2. **Pollack, C.C.**, Gilbert-Diamond, D., Alford-Teaster, J.A., & Onega, T. (2021). Language and Sentiment Regarding Telemedicine and COVID-19 on Twitter: Longitudinal Infodemiology Study. *Journal of Medical Internet Research*, 23(6). <https://doi.org/10.2196/28648>.
3. **Pollack, C.C.**, Gilbert-Diamond, D., Emond, J.A., Eschholz, A., Evans, R.K., Boyland, E.J., & Masterson, T. D. (2021). Twitch User Perceptions, Attitudes, and Behaviours in Relation to Food and Beverage Marketing on Twitch Compared with YouTube. *Journal of Nutritional Science*, 10. <https://doi.org/10.1017/jns.2021.22>
4. Edwards, C.G., **Pollack, C.C.**, Pritschet, S.J., Haushalter, K., Long, J.W., & Masterson, T.D. (2021). Prevalence and Consumption of Alcohol, Candy, Energy Drink, Snack, Soda, and Restaurant Brand Product Marketing on Twitch, Facebook Gaming, and YouTube Gaming. *Public Health Nutrition*. <https://doi.org/10.1017/S1368980021004420>
5. Nesbit, C.B., **Pollack, C.C.**, Mascia, N.S, LaCroix, V.H., Applebee, D.M., Foster Bosco, A., Wilkinson-Ryan, I., Erekson, E.D., & Evans, R.H. (2021). Interest in and Uptake of Genetic Counseling for Preconception Carrier Screening when Offered to Predominately White Reproductive-Age Persons Seeking Gynecologic Care at a Single U.S. Academic Medical Center. *Journal of Genetic Counseling*. <https://doi.org/10.1002/jgc4.1457>.
6. Foley, R.W., **Pollack, C.C.**, Barrella, E., & Wilkins, R. (2021). How Public Values Theory Can Influence Energy Infrastructure Planning: Exploring Values Articulation, Time Horizons, and Substitutability through the Atlantic Coast Pipeline. *Energy Research and Social Science*, 72. <https://doi.org/10.1016/j.erss.2020.101836>
7. Foley, R.W., Ferguson, S.M., & **Pollack, C.C.** (2021). Measuring the Amorphous: Substantive and Methodological Outcomes from Concept Maps. *Journal of Engineering Education*, 110(1), 161 – 183. <https://doi.org/10.1002/jee.20373>
8. **Pollack, C.C.**, Kim, J., Emond, J., Brand, J., Gilbert-Diamond, D., & Masterson, T.D. (2020). Prevalence and Strategies of Energy Drink, Soda, Processed Snack, Candy, and Restaurant Product Marketing on the Online Streaming Platform Twitch. *Public Health Nutrition*, 23(15), 2793 – 2803. <https://doi.org/10.1017/S1368980020002128>.
9. Edwards, C.G., **Pollack, C.C.**, Boyland, E.J., Evans, R.K., Gilbert-Diamond, D., & Masterson, T. (2020). Online Food Marketing in the Live Streaming Environment: What is the Role of Censorship? *Annals of Nutrition and Metabolism*, 76, 371 – 374. <https://doi.org/10.1159/000512118>

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10. Mok, E.M., Greenough, G., & **Pollack, C.C.** (2020). Untreated Obstructive Sleep Apnea is Associated with Increased Hospitalization from Influenza Infection.¹ *Journal of Clinical Sleep Medicine*, 16(12), 2003 – 2007. <https://doi.org/10.5664/jcsm.8744>
11. Ferguson, S. M., Foley, R. W., Eshirov, J. K., & **Pollack, C. C.** (2018). *Refining Concept Maps as a Method to Assess Learning Outcomes Among Engineering Students*. Paper presented at 2018 ASEE Annual Conference & Exposition, Salt Lake City, Utah, July 2018. <https://peer.asee.org/30924>

INVITED TALKS

1. **Pollack, C.C.**, Onega, T., Emond, J.A., Vosoughi, S., O'Malley, A.J., McClure, A.C., Rothstein, R.I., & Gilbert-Diamond, D. *Computational Advances in Health Care Accessibility Research: A Case Study in Obesity Medicine*. Invited oral focus session delivered at the 2021 National Library of Medicine (NLM) Informatics Training Conference, Remote, June 2021.
2. **Pollack, C.C.** *Evaluating State Policies in Telemedicine*. Oral presentation and plenary delivered at the University of Virginia 31st Annual Undergraduate Research and Design Symposium, Charlottesville, VA, April 2018.

CONFERENCE PRESENTATIONS

1. **Pollack, C.C.**, Onega, T., Emond, J.A., Vosoughi, S., O'Malley, A.J., McClure, A.C., Rothstein, R.I., & Gilbert-Diamond, D. *Geographic and Practical Access to American Board of Obesity Medicine Diplomates from 2011 to 2019*. Oral presentation delivered at ObesityWeek2021 (the 39th annual scientific meeting of The Obesity Society).
2. **Pollack, C.C.**, Roderka, M.N., Chinburg, E., Mecchella, J.N., Batsis, J., Finn, S., Rothstein, R.I., Gilbert-Diamond, D., & McClure, A.C. *Impact of Encounter Intensity on Clinic Outcomes at a Rural Weight Management Center*. Poster presentation delivered at ObesityWeek2021 (the 39th annual scientific meeting of The Obesity Society).
3. Knill, C., **Pollack, C.C.**, & Goodman, D. *Cervical Cancer Screening and Follow-Up on Abnormal Screens in Perinatal Women with Opioid Use Disorder*. Oral presentation delivered to Dartmouth-Hitchcock Obstetrics and Gynecology Residency Research Day, Lebanon, New Hampshire, June 2021.
4. Mead, J.S., **Pollack, C.C.**, Puleo, R.A., & St. Ivany, A. *Delivery Outcomes Among Women with a History of Intimate Partner Violence in the United States*. Oral presentation delivered to Dartmouth-Hitchcock Obstetrics and Gynecology Residency Research Day, Lebanon, New Hampshire, June 2021.
5. Darivemula, S., Kouassi-Brou, M., **Pollack, C.C.**, Goodman, D., & Fisher, T. *Determining the Impact of Socioeconomic Status and Distance on Preterm Delivery: A Cross-Sectional, Rural, Single Institution Study*. Oral presentation delivered to Dartmouth-Hitchcock Obstetrics and Gynecology Residency Research Day, Lebanon, New Hampshire, June 2021.
6. **Pollack, C.C.**, Ramjee, D., & Malaty-Rivera, J. *The Impact of COVID-19 on Elected Official Rhetoric and Framing of Healthcare Issues*. Lightning presentation delivered at the 2021 American Statistical Association Symposium on Data Science & Statistics, Remote, June 2021.
7. **Pollack, C.C.** & Krewson, B. *No Hope? More Dope: A Study of the Relationship between Depression and Illicit Drug use in the United States using NHANES Data*. Poster presentation delivered at BigSurv20, Remote, November 2020.

¹ Manuscript selected by Editor-in-Chief of the journal for Continuing Medical Education (CME) Credit

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8. **Pollack, C.C.**, Onega, T., Emond, J., Vosoughi, S., O'Malley, A.J., & Gilbert-Diamond, D. *A Data Science Approach to Evaluate County Trends in Obesity Diplomat Accessibility Over Time*. Poster presentation delivered at ObesityWeek2020 (the 38th annual meeting of The Obesity Society), Remote, November 2020. <https://doi.org/10.1002/oby.23063>
9. Foley, E., **Pollack, C.C.**, Braga, J., & Baker, E. *Efficacy of Cervical Ripening Methods in Obese, Nulliparous Women Undergoing Induction of Labor: A Retrospective Cohort Study*. Oral presentation delivered to Dartmouth-Hitchcock Obstetrics and Gynecology Resident Research Day, Remote, June 2020.
10. **Pollack, C.C.**, Gilbert-Diamond, D., McClure, A.C., Mecchella, J.N., Weintraub, A.B., Roderka, M.N., ..., & Batsis, J.A. *Short-term Outcomes from a Rural, Interdisciplinary, Team-based Weight and Wellness Center*. Poster presentation delivered at ObesityWeek 2019 (the joint annual meeting of the American Society for Metabolic & Bariatric Surgery and The Obesity Society), Las Vegas, Nevada, November 2019.
11. **Pollack, C.C.**, McClure, A.C., Gilbert-Diamond, D., Roderka, M.N., Weintraub, A.B., & Batsis, J.A. *Short-term Outcomes from a Rural, Interdisciplinary, Team-based Weight and Wellness Center*. Poster presentation delivered at the 1st Annual Dartmouth-Hitchcock Scientific Retreat, Hanover, New Hampshire, October 2019.
12. Nesbit, C., Wilkinson-Ryan, I., Erekson, E., LaCroix, V., Foster-Bosco, A., Applebee, D., **Pollack, C.C.**, & Evans, R. *Offering Universal Carrier Screening to Women of Reproductive Age Seeking Routine Gynecologic Care*. Poster presentation delivered at the 75th Annual American Society for Reproductive Medicine Scientific Congress & Expo, Philadelphia, Pennsylvania, October 2019. <https://doi.org/10.1016/j.fertnstert.2019.07.1006>
13. Mok, E., Greenough, G., & **Pollack, C.C.** *Untreated Obstructive Sleep Apnea is Associated with Increased Hospitalization from Influenza Infection*. Poster presentation delivered at SLEEP 2019 (the 33rd Annual Meeting of the American Academy of Sleep Medicine), San Antonio, Texas, June 2019.
14. Crosier, M.B., Moran, D., Lee, A., Keating, G., **Pollack, C.C.**, O'Hara, D., ..., & Foley, R. *A Bridge Between Students and Instructors: Undergraduate Teaching Assistants (UTAs) as Collaborators in Course Redesign*. Poster presentation delivered at STGlobal, Washington, D.C., March 2018.

NEWS ARTICLES

1. Luo, D. & **Pollack, C.** (February 16, 2021). Federal COVID Data 101: Working with Hospitalization Numbers. *The COVID Tracking Project at The Atlantic*. <https://covidtracking.com/analysis-updates/covid-data-101-working-with-hospitalization-numbers>
2. The COVID Tracking Project. (February 4, 2021). The Pandemic Is in Tenuous Retreat. *The Atlantic*. <https://www.theatlantic.com/health/archive/2021/02/covid-19-deaths-are-finally-decline/617936/>²
3. The COVID Tracking Project. (January 28, 2021). COVID-19 Deaths Are Still Rising. *The Atlantic*. <https://www.theatlantic.com/health/archive/2021/01/covid-19-deaths-are-still-rising/617863/>³
4. The COVID Tracking Project. (January 21, 2021). Pandemic Numbers Are (Finally) Tiptoeing in the Right Direction. *The Atlantic*. <https://www.theatlantic.com/health/archive/2021/01/pandemic-data-encouraging-week/617768/>⁴

² Also available at <https://covidtracking.com/analysis-updates/numbers-are-high-but-improving-this-week-in-covid-19-data-feb-4>

³ Also available at <https://covidtracking.com/analysis-updates/outbreaks-ease-across-the-us-but-our-numbers-are-still-very-high-week-in-covid-19-data-jan-28>

⁴ Also available at <https://covidtracking.com/analysis-updates/encouraging-indicators-are-everywhere-but-deaths-remain-high-this-week-in-covid-19-data-jan-21>

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5. **Pollack, C.** & Luo, D. (December 15, 2020). Current, New, and Cumulative Hospitalizations: What They Are and Why They Matter. *The COVID Tracking Project at The Atlantic*. <https://covidtracking.com/blog/current-new-and-cumulative-hospitalizations>
6. Luo, D., Glassman, R., Ladyzhets, B., & **Pollack, C.** (December 11, 2020). New HHS Dataset Tells us Precisely where COVID-19 is Hitting Hospitals. *The COVID Tracking Project at The Atlantic*. <https://covidtracking.com/blog/new-hhs-dataset-tells-us-precisely-where-COVID-19-is-hitting-hospitals>
7. Camberg, N., Curiskis, A., Oehler, K., Oppenheim, J., **Pollack, C.**, Sahejpal, A., & Wang, S. (November 10, 2020). Introducing the COVID Tracking Project City Dataset. *The COVID Tracking Project at The Atlantic*. <https://covidtracking.com/blog/introducing-the-covid-tracking-project-city-dataset>
8. Camberg, N., Curiskis, A., Oehler, K., **Pollack, C.**, & Sahejpal, A. (September 16, 2020). State-level Data Obscures Important Variations in how Cities and Counties Experience COVID-19. *The COVID Tracking Project at The Atlantic*. <https://covidtracking.com/blog/state-level-data-obscures-important-variations>

SELECT UNDER REVIEW

1. **Pollack, C.C.**, Emond, J.A., & Masterson, T.D. Associations Between Adolescent and Young Adult External Food Cue Responsiveness (EFCR) and Brand Recall, Product Craving, and Product Purchasing in the Livestreaming Food Marketing Environment. Submitted to *Public Health Nutrition*.
2. Gerjevic, K.A., **Pollack, C.C.**, & Shaw, J.S. Minimally-Invasive Autologous Fascia Sling at the Mid-Urethra. Submitted to *Female Pelvic Medicine & Reconstructive Surgery*.

GRANTS, FELLOWSHIPS, & AWARDS

Graduate Alumni Research Award Dartmouth College Guarini School for Graduate and Advanced Studies	2021
3rd Place, 3 Minute Thesis Competition Dartmouth College Guarini School for Graduate and Advanced Studies	2021
Department Finalist, Guarini Teaching Award Dartmouth College Guarini School for Graduate and Advanced Studies	2021
Big Data to Knowledge T32 Training Grant Fellowship National Institutes of Health National Library of Medicine via Dartmouth College	2020 – 2021
QBS Teaching Assistant Training Fellowship Dartmouth College Program in Quantitative Biomedical Sciences	2019 – 2021
1st Place, Science, Technology, and Society Research Category University of Virginia 31 st Annual Undergraduate Research and Design Symposium	2018
Automata Processor Ambassadors Research Fellowship University of Virginia Center for Automata Processing	2016 – 2017
Society of Women Engineers Baltimore-Washington Section Scholarship Society of Women Engineers	2016

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Jefferson Trust Grant Recipient 2016
Jefferson Trust and University of Virginia Alumni Association

A. Thomas Young Endowed Scholarship 2016
University of Virginia School of Engineering and Applied Sciences

Rodman Scholars Program 2014 – 2018
University of Virginia School of Engineering and Applied Sciences

TEACHING EXPERIENCE

Dartmouth College Hanover, New Hampshire/Remote
Advanced Methods in Health Services Research (Teaching Fellow) Spring 2020, Spring 2021
Foundations of Programming for Data Scientists (Teaching Fellow) Fall 2020, Winter 2021
R Programming Club (Guest Lecturer) Spring 2020
Applied Epidemiological Methods 2 (Teaching Fellow) Winter 2020
Epidemiology 1 (Teaching Assistant) Fall 2019

New Hampshire Academy of Science Lyme, New Hampshire
Beginner Computer Programming for Big Data (Volunteer) Summer 2019

University of Virginia Charlottesville, Virginia
Ordinary Differential Equations (Teaching Assistant) Spring 2017, Spring 2018
Science, Technology, and Contemporary Issues (Teaching Fellow) Fall 2017
Physiology II for Engineers (Teaching Fellow) Spring 2017
Applied Statistics and Probability (Teaching Assistant) Fall 2016, Fall 2017
Technical Design Thinking (Co-Creator & Teaching Assistant) Spring 2015

VOLUNTEERING & PROFESSIONAL SERVICE

Student Center for Research, Writing, and Information Technology, Dartmouth College Hanover, New Hampshire
Graduate Peer Writing Tutor Fall 2018 – Present
Fulbright Writing Advisor Summer 2021 – Fall 2021

Engineering Policy Internship Program, University of Virginia Remote
Alumni Board of Advisors (Class of 2017) Fall 2019 – Fall 2021

Epidemiology Students Club, Dartmouth College Hanover, New Hampshire
Founding Member Fall 2019 – Fall 2021

Graduate Student Council (GSC), Dartmouth College Hanover, New Hampshire
Communications Chair Spring 2019 – Spring 2021
Ad Hoc Committee on GSC Organization Legal Compliance Winter 2019 – Spring 2019
Department Representative Fall 2018 – Spring 2019

MENTORING EXPERIENCE

Peter Green, Dartmouth College Class of 2022 Winter 2021 – Summer 2021
Anna Byrd, Dartmouth College Class of 2023 Winter 2021 – Summer 2021
Katherine Miller, Dartmouth College Class of 2022 Winter 2021 – Spring 2021

PEER REVIEWER

Journals: *Energy Research and Social Science*; *PLOS One*; *Preventive Medicine Reports*
Conferences: NeurIPS 2021 (MLPH: Machine Learning in Public Health Workshop)

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PROFESSIONAL MEMBERSHIPS

American Association for the Advancement of Science (Student Member); American Statistical Association (Student Member); New England Statistical Society (Student Member); Society for the Science & the Public (International Science and Engineering Fair Alumna); Society for Epidemiologic Research (Student Member); Society of Women Engineers (Member); The Obesity Society (Student Member)

TECHNICAL SKILLS & CERTIFICATIONS

Languages (Select): Python, R, SQL, Apache Spark, Cypher/Neo4j, ArcGIS, MATLAB

Technical Skills (Select): Data Analysis, Data Mining, Data Visualization, Data Wrangling, Design Thinking, Literature Reviews, Machine Learning, Microsoft Office, Natural Language Processing, Predictive Modeling, Regression Analysis, Social Network Analysis, Survival Analysis

Graduate Coursework (Select): Advanced Methods in Health Services Research, Bioinformatics, Biostatistics, Epidemiology, Machine Learning and Statistical Data Analysis, Molecular Basis of Human Health

Undergraduate Coursework (Select): Applied Statistics and Probability; Biomechanics; Biomedical Data Science; Biomedical Systems Design and Analysis; Computational Biomedical Engineering; Cellular and Molecular Biology for Engineers; Databases; Exogenous Biomaterials; Linear Algebra; Mathematical Statistics; Ordinary Differential Equations; Physiology; Regression Analysis; Science and Technology Policy; Statistical Machine Learning; Survival Analysis & Reliability Theory

Certifications: Future Faculty Series (June 2021, Issuer: Dartmouth Center for the Advancement of Learning [DCAL]); Enterprise Design Thinking Practitioner (June 2020, Issuer: IBM)

REFERENCES

Available upon request