

Naimisha Movva, M.P.H.

SUPERVISING EPIDEMIOLOGIST

CONTACT INFORMATION

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PROFESSIONAL PROFILE

Ms. Naimisha Movva is an epidemiologist in the EpidStrategies division, and she manages numerous large- and small- scale real-world studies in various therapeutic areas, including oncology, infectious diseases, and heart disease, in addition to nutritional work in the United States and Europe. Ms.Movva holds a Master of Public Health degree from the Yale School of Public Health, with an emphasis in chronic disease epidemiology and regulatory affairs. She has led data analyses of primary and secondary data, systematic literature reviews, and manuscript and regulatory document writing.

Ms. Movva taught several discussion sections for graduate courses in epidemiology and analytic methods as a teaching fellow during her time at Yale. Currently, she serves as a teaching fellow for an introduction to epidemiology course at Georgetown University. Ms. Movva has presented work at conferences across research settings, including the International Society for Pharmacoepidemiology, IDWeek, Society for Research in Child Development, and European Society for Medical Oncology.

EDUCATION AND DEGREES EARNED

Master of Public Health in Chronic Disease Epidemiology; Concentration in Regulatory Affairs Yale University, Yale School of Public Health, New Haven, Connecticut

Honors Bachelor of Arts in Biological Sciences and Psychology University of Delaware, Newark, Delaware









PROFESSIONAL ASSOCIATIONS

- 2021–Present American Academy of Pediatrics
- 2020–Present International Society for Pharmacoeconomics and Outcomes
- 2019–2021 International Society for Pharmacoepidemiology
- 2018–Present Society for Epidemiologic Research

CERTIFICATIONS

- 2020 DistillerSR Super User Certification
- 2019 SAS Certified Base Programmer for SAS 9

SELECTED PROFESSIONAL EXPERIENCE

Managed systematic literature reviews for topics that have included cancer, Parkinson's disease, and respiratory syncytial virus for various clients.

Developed protocols and statistical analysis plans for many data sets, including HCUP, Medicaid, and National Center for Health Statistics.

Provided data management and statistical support for small clinical trials and pos-hoc clinical trial analyses.

Gained extensive experience summarizing and critiquing available epidemiologic literature on environmental and occupational exposures.

Created course content in collaboration with the professor for a Principles of Epidemiology course at Georgetown University.

As a graduate student consultant, reviewed community health improvement plans for four community health improvement coalitions and developed a set of survey questions for key informants Managed administration of the survey and summarized/analyzed the results. Prepared a report and presentation of results for each of the four coalitions.

Conducted research for a Yale program called "Becoming Breastfeeding Friendly." Evaluated the use of evidence for internal decision making within the WIC Supplementary Program. Wrote a case-study report for publication on the project's website.

As a research associate, managed various aspects of multiple projects, conducted literature reviews and data abstraction/analysis, and prepared manuscripts. Submitted a manuscript for publication (see Babik et al., 2018, below).

Analyzed longitudinal data from 2013–2016 to determine whether a pay-for-performance initiative in England, the Quality Outcomes Framework, actually addressed patient outcomes and whether it improved health care over time. Reported results in the *Oxford Research Archive*.

JOURNAL PEER REVIEWER

Annals of Epidemiology

BOOK CHAPTER

Fryzek J, Frankenfeld C, **Movva N**, Bylsma L, Aquavella J. 2022. Insights into epidemiology. Chapter 21 in: Roberts SM, James RC, Williams PL (Eds), Principles of Toxicology: Environmental and Industrial Applications, Fourth edition. John Wiley & Sons, Inc., Hoboken, NJ, EISBN 1119635195.

MANUSCRIPTS

Blatt AZ, Suh M, Walter EB Jr, Wood CT, Espinosa C, ... **Movva N**, Reichert H, Fryzek JP, Nelson CB. 2024. Geographic progression of infant respiratory syncytial virus associated bronchiolitis across the United States before and since the onset of COVID-19: Results from four health systems, 2015-2023. Influenza Other Respir Viruses 18(5):e13298; doi: 10.1111/irv.13298.

Blatt AZ, Suh M, Walter EB Jr, Wood CT, Espinosa C, ... **Movva N**, Reichert H, Fryzek JP, Nelson CB. 2024. Trends in RSV testing patterns among infants presenting with bronchiolitis: Results from four United States health systems, 2015-2023. Ann Epidemiol 94:72–80; <u>open access</u>.

Suh M, **Movva N**, Jiang X, Reichert H, Pastula ST, Sacks NC, Frankenfeld C, Fryzek JP, Simões AF. 2024. Healthcare utilization among infants covered by Medicaid and newly diagnosed with respiratory syncytial virus. Open Forum Infect Dis, <u>open access</u>.

Movva N, Reichert H, Hooda N, Bylsma LC, Mitchell M, Cohen SS. 2023. Dietary eating patterns, dairy consumption, and anxiety: A systematic literature review. PLoS One 18(12):e0295975. doi: 10.1371/journal.pone.0295975. PMID: 38153944.

Wharton GT, Becker C, Bennett D, Burcu M, Bushnell G, Ferrajolo C, Kaplan S, McMahon AW, **Movva N**, Raman SR, Scholle O, Suh M, Sun JW, Horton DB. 2023. Overview of global real-world data sources for pediatric pharmacoepidemiologic research. Pharmacoepidemiol Drug Saf. doi: 10.1002/pds.5695. Epub ahead of print. PMID: 37690792.

Bylsma LC, Pundole X, Ju C-H, Hooda N, **Movva N**, Elkhouly E, Bebb G, Fryzek J, et al. 2023. Systematic literature review of the prevalence and prognostic value of delta-like ligand 3 protein expression in small cell lung cancer. Target Oncol [open access].

Movva N, Pastula ST, Rege SV, Lewis RJ, Bylsma LC. 2023. Scoping review of employer-led research using employee health claims data. <u>Popul Health Manag</u> 26(5):341–352; doi: 10.1089/pop.2023.0140.

Daniels D, Wang D, Suryadevara M, Wolf Z, Nelson CB, Suh M, **Movva N**, Reichert H, Fryzek JP, Domachowske JB. 2023. Epidemiology of RSV bronchiolitis among young children in central New York before and after the onset of the COVID-19 pandemic. Pediatr Infect Dis J. doi: 10.1097/INF.0000000000004101, Epub ahead of print. PMID: 37725814.

Dalvi T, Nørgaard M, Fryzek JP, **Movva N**, Pedersen L, Hansen HP, et al. 2023. Biomarker expression and survival in patients with non-small cell lung cancer receiving adjuvant chemotherapy in Denmark. PLoS ONE 18(4):e0284037, <u>https://doi.org/10.1371/journal.pone.0284037</u>.

Gillezeau C, **Movva N**, van Gerwen M, Rabon-Stith K, Shire N, Brohawn PZ, Taioli E, Fryzek J. 2022. Interferon gamma expression and mortality in unselected cohorts of urothelial bladder cancer patients. <u>PLoS One</u> 17(8):e0271339, doi: 10.1371/journal.pone.0271339. PMID: 36040901; PMCID: PMC9426882.

Cohen SS, Bylsma LC, **Movva N**, Alexander DD. 2022. Theoretical attributable risk analysis and Disability Adjusted Life Years (DALYs) based on increased dairy consumption. BMC Public Health 22(1):1625, doi: <u>10.1186/s12889-022-14042-7</u>.



Doepker C, **Movva N**, Cohen SS, Wikoff DS. 2022. Benefit-risk of coffee consumption and all-cause mortality: A systematic review and disability adjusted life year analysis. Food Chem Toxicol 170:113472, doi: <u>10.1016/j.fct.2022.113472</u>.

Suh M, **Movva N**, Jiang X, Bylsma LC, Reichert H, Fryzek JP, Nelson CB. 2022. Respiratory syncytial virus (RSV) is the leading cause of United States infant hospitalizations 2009–2019: A study of the National (Nationwide) Inpatient Sample. J Infect Dis 226(Suppl 2):S154–S163, <u>open access</u>.

Movva N, Suh M, Reichert H, Hitze B, Sendak MP, Wolf Z, Carr S, Kaminski T, White M, Fisher K, Wood CT, Fryzek JP, Nelson CB, Malcolm WF. 2022. Respiratory syncytial virus during the COVID-19 pandemic compared to historic levels: A retrospective cohort study of a health system. J Infect Dis 226(Suppl 2):S175–S183 open access.

Suh M, **Movva N**, Jiang X, Reichert H, Bylsma LC, Fryzek JP, Nelson CB. 2022. Respiratory syncytial virus burden and healthcare utilization in United States infants, <1 year of age: Study of nationally representative databases, 2011–2019. J Infect Dis 226(Suppl 2):S184–S194, <u>open access</u>.

Suh M, **Movva N**, Bylsma LC, Fryzek JP, Nelson CB. 2022. A systematic literature review of the burden of respiratory syncytial virus disease and health care utilization among United States infants younger than 1 year. J Infect Dis 226(Suppl 2):S195–S212, <u>open access</u>.

Movva N, Suh M, Bylsma LC, Fryzek JP, Nelson CB. 2022. Systematic literature review of respiratory syncytial virus laboratory testing practices and incidence in United States infants and children <5 years of age. J Infect Dis 226(Suppl 2):S213–S224, <u>open access</u>.

Reichert H, Suh M, Jiang X, **Movva N**, Bylsma LC, Fryzek JP, Nelson CB. 2022. Mortality associated with respiratory syncytial virus, bronchiolitis, and influenza among infants in the United States: A birth cohort study from 1998 to 2018. J Infect Dis 226(Suppl 2):S246–S254, <u>open access</u>.

Bylsma LC, Suh M, **Movva N**, Fryzek JP, Nelson CB. 2022. Mortality among United States infants and children under 5 years of age with respiratory syncytial virus and bronchiolitis: A systematic literature review. J Infect Dis 226(Suppl 2):S267–S281, <u>open access</u>.

Cronin-Fenton D, Dalvi T, **Movva N**, Pedersen L, Hansen H, Fryzek J, Hedgeman E, Mellemgaard A, Rasmussen TR, Shire N, Hamilton-Dutoit S, Nørgaard M. 2021. PD-Lr expression *EGFR* and *KRAS* mutations and survival among stage III unresected non-small cell lung cancer patients: A Danish cohort study. Nature: Scientific Reports, https://doi.org/10.1038/s41598-021-96486-2.

Cohen SS, Roger VL, Weston SA, Jiang R, **Movva N**, Yusuf AA, Chamberlain AM. 2020. Evaluation of claimsbased computable phenotypes to identify heart failure patients with preserved ejection fraction. Pharmacol Res Persp, open access, <u>https://bpspubs.onlinelibrary.wiley.com/doi/10.1002/prp2.676</u>.

Fryzek JF, Bylsma L, Mease K, **Movva N**, Welsh BT, Wood M. 2020. Critical insights into nonclinical toxicology and real-world evidence essential for a successful rare disease product launch. White Paper at World Orphan Drug Conference.

Hoff CE, **Movva N**, Rosen Vollmar AK, Pérez-Escamilla R. 2019. Impact of maternal anxiety on breastfeeding outcomes: A systematic review. Advanc Nutr pii: nmy132, doi: 10.1093/advances/nmy132.

Babik I, **Movva N**, Baraldi Cunha A, Lobo MA. 2019. Development of self-feeding behavior in children with typical development and those with arm movement impairments. Develop Psychobiol 00:1–13, https://doi.org/10.1002/dev.21861.

Movva N, Jani A. 2018. The value of pay-for-performance in England: An evaluation of NHS England's Quality Outcomes Framework. University of Oxford Research Archive, no. 2.

ABSTRACTS AND PRESENTATIONS

Kelsh M, Bylsma LC, Jiang X, **Movva N**, Sacks NC. To be an orphan disease or not to be: An evaluation of prevalence estimates for cancers near the orphan status threshold and implications for orphan drug planning. International Society for Pharmacoepidemiology, 40th Annual Meeting, Berlin, Germany, August 2024.

Pundole X, Ju C-H, Bylsma LC, Hooda N, **Movva N**, Elkhouly E, Bebb DG, Fryzek J, et al. 2023. Prevalence of delta-like ligand 3 expression in small cell lung cancer. J Clinical Oncology 41:16_suppl e20618.

Blatt A, Suh M, Walter E, Jr., Wood CT, Espinosa C, Enriquez-Bruce ME...**Movva N**, Reichert H, Fryzek JP, et al. Seasonality of infant respiratory syncytial virus associated bronchiolitis around the US since the onset of COVID-19: Results from four US health systems 2016-17 through 2022-23. Poster 1535431, IDWeek 2023, Boston, MA, October 2023.

Wharton GT, Becker C, Bennett D, Burcu M, Bushnell G, Ferrajolo C, Kaplan S, McMahon AW, **Movva N**, Raman SR, Scholle O, Suh M, Sun JW, Horton DB. 2023. Overview of global real-world data sources for pediatric pharmacoepidemiologic research. Poster presentation at the 39th International Conference on Pharmacoepidemiology and Therapeutic Risk Management (ICPE), Halifax, Nova Scotia, August 2023.

Reichert H, Jiang X, Suh M, Pastula S, **Movva N**, Fryzek J, Simões EAF. The burden of RSV and bronchiolitis in the US infant Medicaid population extends beyond the inpatient setting. Poster 192, International Society for Pharmacoepidemiology (ICPE) annual meeting, Halifax, Nova Scotia, August 2023.

Pastula S, Suh M, Jiang X, Reichert H, **Movva N**, Fryzek J, Simões EAF. Respiratory syncytial virus (RSV) and bronchiolitis epidemiology among the United States infant Medicaid populations in seven states. Poster 191, International Society for Pharmacoepidemiology (ICPE) annual meeting, Halifax, Nova Scotia, August 2023.

Suh M, Reichert H, **Movva N**, Fisher K, Wood CT, Wolf Z ..., Fryzek JP, et al. Pilot surveillance of infant lower respiratory tract infections and respiratory syncytial virus in the United States during the COVID pandemic. Poster 95, International Society for Pharmacoepidemiology (ICPE) annual meeting, Halifax, Nova Scotia, August 2023.

Suh M, Reichert H, Jiang X, Pastula ST, **Movva N**, Fryzek J, Simoes E. The burden of RSV and bronchiolitis in the US infant Medicaid population extends beyond the inpatient setting. Oral presentation to the Pediatric Academic Societies meeting, Washington, DC, April 2023.

Manemann SM, Cohen SS, Reading SF, Noshad S, **Movva N**, Weston SA, Killian JM, Chamberlain AM. Change in low-density lipoprotein cholesterol and risk of subsequent cardiovascular events among patients with myocardial infarction. Poster presentation to AHA EPI | Lifestyle Scientific Session (American Heart Association), Chicago, IL, March 2022.

Movva N, Suh M, Jiang X, Reichert H, Bylsma L, Rizzo CP, White M, Fryzek J, Nelson CB. Medicaid infants have the highest respiratory syncytial virus (RSV) hospitalization burden and rates among United States (US) infants aged <1 year: An analysis of the 2011–2018 National (Nationwide) Inpatient Sample (NIS). Abstract accepted for AAP Experience, National Conference & Exhibition (American Academy of Pediatrics), Philadelphia, PA, October 2021.

Suh M, **Movva N**, Bylsma L, Demont C, Rizzo C, Fryzek J, Nelson CB. Systematic literature review (SLR) of respiratory syncytial virus (RSV) burden and health care utilization (HCU) among infants in the United States (US). Poster presentation at 37th ICPE (International Conference on Pharmacoepidemiology & Therapeutic Risk Management), virtual conference, August 2021.

Malcolm W, Fisher K, Wood CT, **Movva N**, Suh M, Wolf Z, Balu S, Sendak M, Hintze B, White M, Fryzek J, Nelson CB. Infant lower respiratory tract infections, including those caused by RSV, are significantly below historical levels during the COVID-19 pandemic. Pediatrics Academic Societies 2021, April–May 2021.



Suh M, Jiang X, **Movva N**, Fryzek J, Bylsma L, Rizzo C, Nelson CB. Hospitalizations and emergency department visits for respiratory syncytial virus among infants aged <1 year in the United States: An analysis of nationwide inpatient and emergency room data. Presentation to IDWeek virtual conference on infectious disease, October 2020.

Cronin-Fenton D, Dalvi T, **Movva N**, Pedersen I, Hansen H, Fryzek J, Mellemgaard A, Rasmussen T, Klein A, Hamilton-Dutoit S, Nørgaard M. PD-L1 expression and survival in stage III unresectable non-small cell lung cancer patients in Denmark. Accepted for presentation to a virtual meeting (due to COVID-19) of the European Society for Medical Oncology (ESMO), abstract #2865, August 2020.

Movva N, Warrener P, Sellman B, Fyrzek J. Hospitalizations due to klebsiella pneumoniae pneumonia in the United States. Poster presentation at the 35th International Conference on Pharmacoepidemiology & Therapeutic Risk Management, Philadelphia, PA, August 2019.

Cohen S, Roger VL, Weston SA, Jiang R, **Movva N**, Yusuf A, Chamberlain A. Development of computable phenotypes to identify heart failure patients with preserved ejection fraction. Poster presentation at the 35th International Conference on Pharmacoepidemiology & Therapeutic Risk Management, Philadelphia, PA, August 2019.

Babik, I, **Movva N**, Cunha A, Lobo MA. 2019. Characterization of self-feeding and problem solving in children with arm movement impairments. Poster accepted for the Society for Research in Child Development Biennial Conference, Baltimore, MD. March 2019.

Movva N, Babik I, Lobo MA. Self-feeding behavior in typically developing children and children with arm movement impairments. Poster presentation at the Society for Research in Child Development Biennial Conference Austin, TX, April 2017.

Babik I, Cunha A, **Movva N**, Lobo MA. Longitudinal effects of an exoskeletal garment on reaching and object manipulation in children with arm movement impairments. Poster presentation at the Society for Research in Child Development Biennial Conference, Austin, TX, April 2017.

Babik I, **Movva N**, Lobo MA. Impact of the Playskin Lift[™], a novel exoskeletal garment, on reaching and object exploration behaviors in infants at-risk. Poster presentation at the Cerebral Palsy Research Symposium, Newark, DE, May 2016.

Babik I, **Movva N**, Lobo MA. Object exploration in typically developing and at-risk infants: developmental patterns and possible interventions. Paper symposium presentation at the 20th Biennial Meeting of the International Society for Infant Studies, New Orleans, LA, May 2016.

Babik I, **Movva N**, Lobo MA. Hand-use for reaching and object exploration in infants with impaired upper extremity functioning: Preferences vs. affordances. Poster presentation at the 20th Biennial Meeting of the International Society for Infant Studies, New Orleans, LA, May 2016.

Babik I, **Movva N**, Lobo MA. Novel playskin liftTM exoskeletal garment improves multimodal object exploration in at-risk infants. Poster presentation at the Combined Sections Meeting of the American Physical Therapy Association, Anaheim, CA, February 2016.

Movva N, Babik I, Lobo MA. Effectiveness of the first exoskeletal garment (Playskin LiftTM) to improve reaching and object exploration in infants born with brain injury. Poster presentation at the Northeast Regional IDeA Conference, Bar Harbor, Maine, September 2015.

Movva N, Babik I, Lobo MA. Reaching new levels with the Playskin LiftTM exoskeletal garment in infants born with brain injury. Poster presentation at the Undergraduate Research and Service Celebratory Symposium at UD, Newark, DE, August 2015.



Babik I, **Movva N**, Lobo MA. Manipulation of arm support changes the movement dynamics of the trunk, and hands in children with arthrogryposis. Poster presentation at the 12th Motor Control Summer School (MCSS-XII); Antiochian Village, Bolivar, PA, May/June 2015.

Babik I, Libassi L, **Movva N**, Lobo MA. Rehabilitation intervention changing the dynamics of movement in children with arthrogryposis. Poster presentation at the Society for Research in Child Development Biennial Conference, Philadelphia, PA, March 2015.

Movva N, Babik I, Galloway JC, Lobo MA. Use of an innovative rehabilitation device for infants to improve upper extremity functionality. Poster presentation at the Undergraduate Research and Service Celebratory Symposium, Newark, DE, August 2014.

PROTOCOL REGISTRATIONS

Movva N, Cohen S, Pastula S. 2023. Systematic literature review of whole milk dairy food consumption and cardiometabolic outcomes. PROSPERO 2023 CRD42023427990

Pastula S, Bylsma LC, **Movva N**, Rege S, Lewis RJ, Fryzek JP. 2023. Scoping review of indices to monitor community health. https://doi.org/10.17605/OSF.IO/NKQV2

Bylsma L, Fryzek J, **Movva N**, Frankenfeld C, Hooda N, Pundole X, et al. 2022. Systematic literature review of the prevalence and prognostic value of delta-like ligand 3 protein expression in small cell lung cancer. PROSPERO 2022 CRD42022351119

Bylsma LC, **Movva N,** Fryzek JP, Rege S, Lewis RJ. 2022. Scoping review of employer-led research using employee health claims data. https://doi.org/10.17605/OSF.IO/QUP2G

Mitchell M, Cohen S, Movva N, Bylsma L, Hooda N. 2022. Systematic review of the potential association dietary eating patterns (specifically *including* whole dairy products) and anxiety in humans. PROSPERO 2022 CRD42022333785

Mitchell M, Cohen S, Suh M, Bylsma L, **Movva N**. 2022. Systematic review of the potential association between whole dairy products and their components on non-inflammatory immune outcomes in humans. PROSPERO 2022 CRD42022333780

Suh M, Cloud M, Balasubramanian A, **Movva N**, Fryzek J, Cohen S. 2022. A systematic literature review (SLR) of MTAP deletions in multiple solid and hematologic cancers. PROSPERO 2022 CRD42022354037.

Fryzek J, Suh M, **Movva N**, Bylsma L. 2020. Protocol: Systematic literature review and meta-analysis of respiratory syncytial virus (RSV) testing patterns, RSV burden, and RSV clinical sequalae among infants and children up to 5 years of age living in the United States. PROSPERO 2020 CRD42020162991