

Kyle Edward Grealis

Lead Data Analyst / Biostatistician

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Updated: February 2026

EDUCATION

M.S. in Biostatistics, Summa Cum Laude

University of Miami Miller School of Medicine, Miami, FL

B.S. in Health Sciences, Summa Cum Laude

Purdue University Global, West Lafayette, IN

A.A.S. in Respiratory Therapy

Rutgers University (f.k.a. UMDNJ), Stratford, NJ

ACADEMIC EXPERIENCE

Lead Research Analyst | University of Miami, Miami, FL

2023 – Present

Implementation of machine learning models on population health studies; development of data pipelines from REDCap to end users; data visualization and Shiny web application development; coauthoring R packages for data science workflows

Bioinformatics Analyst | University of Miami, Miami, FL

2022 – 2023

Data cleaning, exploratory analysis, and statistical modeling for international pulmonary research studies; contributed to statistical analysis plans and academic manuscripts; incorporated SAS/STAT, SAS/GRAPH, SAS/MACRO, and R throughout the analytic process; performed pulmonary function testing per ATS protocols

Senior Respiratory Therapist | University of Miami, Miami, FL

2019 – 2022

Pulmonary function testing; assisted with rigid and fiberoptic bronchoscopy with endobronchial ultrasound; developed in-patient and out-patient plans of care; coordinated home rehabilitation therapies

Registered Respiratory Therapist | Physicians Regional Medical Center, Naples, FL

2004 – 2019

Clinical Coordinator; critical care evaluation and planning; new employee and student preceptorship; BLS instructor

Certified Respiratory Therapist | Kennedy Health Systems, Stratford, NJ

2003 – 2004

Pharmacy Technician | Kennedy Health Systems, Stratford, NJ

1998 – 2003

MILITARY SERVICE

Equal Opportunity Leader | United States Army Reserve, 365th Engineer Company (SAPPER), Cape Coral, FL

2017 – 2020

Squad Leader | United States Army Reserve, 365th Engineer Company (SAPPER), Cape Coral, FL

2016 – 2020

PEER-REVIEWED ARTICLES

1. RR Balise, **K Grealis**, L Brandt, SX Luo, G Odom, G Jean-Baptiste, DJ Feaster. (2025). Applying machine learning in predicting medication treatment outcomes for opioid use disorder. *Journal of Substance Use and Addiction Treatment*. Advance online publication.
2. L Poudel, A Baral, A Abdshah, **K Grealis**, A Aka, S Paudel, DC Vidot. (2025). Sleep disturbances among young adult dual users of cigarettes and e-cigarettes: analysis of the 2020 National Health Interview Survey. *PLOS ONE* 20(3), e0320748. <https://doi.org/10.1371/journal.pone.0320748>.
3. D Goddard-Eckrich, **K Grealis**, N El-Bassel, DW Lounsbury, N Dsouza, J Bhuiyan, M Cervantes, A Angerame, DJ Feaster, E Kim, TTK Huang, NS Sabounchi, L Gilbert, FR Levin, K Edwards, OS Gatanga, T McCrimmon, JL David, T Hunt, EV Nunes, E Wu, D Gutnick, S Rodriguez, DE Gruss, E Rodgers, A Campbell, J Xu, R Balise. (2025). Development of a brief stigma and perceptions questionnaire for pharmacists: an exploratory factor analysis approach in New York state counties enrolled in the healing communities study. *Journal of Substance Use and Addiction Treatment*, 169. <https://doi.org/10.1016/j.josat.2024.209566>.
4. T Siddharthan, **K Grealis**, NM Robertson, M Lu, S Liu, SL Pollard, S Hossen, P Jackson, NA Rykiel, AC Wosu, O Flores-Flores, SA Quaderi, P Alupo, B Kirenga, F Ricciardi, JA Barber, RK Chandyo, AK Sharma, S Kumar Das, L Shresthra, JJ Miranda, W Checkley, JR Hurst et al. (2024). Assessing the prevalence and impact of preserved ratio impaired spirometry in low-income and middle-income countries: a post-hoc cross-sectional analysis. *The Lancet Global Health* 12(9). p.e1498-e1505.
5. A Alexis, NM Punjabi, **K Grealis**, A Wanner. (2024). A comparative study of bronchodilator response: utilizing pre-bronchodilator versus predicted normal values. *BMC Pulmonary Medicine* 24(1), p.54.
6. S Raju, **K Grealis**, E Gonzalez, K Nakrani, T Otvos, J Kirkness, A Fouras, R Wise, NM Punjabi, T Siddharthan. (2023). Ventilation heterogeneity from x-ray velocimetry predicts COPD severity. *European Respiratory Journal* 62 (suppl 67).
7. T Siddharthan, **K Grealis**, JP Kirkness, T Otvos, D Stefanovski, A Tombelson, M Dalzell, E Gonzalez, K Nakrani, D Wegner, MG Lester, B Richmond, A Fouras, NM Punjabi. (2023). Quantifying ventilation by x-ray velocimetry in healthy adults. *Respiratory Research* 24 (1), p.215.

CONFERENCE ABSTRACTS

1. DM Moore, **K Grealis**, E Gonzalez, T Siddharthan, NM Punjabi, AR Abreu. The association between sleep hygiene and cessation of cigarette smoking. (2023). *American Thoracic Society*. A36. Sleep-related Health Services Research, A1433-A1433.

2. A Tombelson, **K Grealis**, T Otvos, JP Kirkness, A Fouras, NM Punjabi, T Siddharthan. (2023). Validation of x-ray velocimetry with pneumotachograph to assess respiratory physiology. *American Thoracic Society*. A17. Tell Me What You See: New Studies in Lung Imaging, A1045-A1045.
3. D Karmali, M Dalzell, E Gonzalez, **K Grealis**, E Castillo, JP Kirkness, T Otvos, A Fouras, NM Punjabi, T Siddharthan. (2023). Assessment of regional lung ventilation using computer tomography (CT) lung ventilation analysis in chronic obstructive pulmonary disease (COPD). *American Thoracic Society*. A108. New Insights into Chronic Obstructive Pulmonary Disease. A2699-A2699.
4. **K Grealis**, T Siddharthan, S Pollard, D Hossain, P Alupo, R Chandyo, M Cardenas, O Flores-Flores, B Kirenga, J Miranda, A Sharma, L Shrestha, W Checkley, J Hurst. (2023). Prevalence and burden of PRISM in population cohorts from three LMIC settings. *American Thoracic Society*. C17. In This Together: Confronting Environmental Health Challenges Around the World. A4510-A4510.
5. T Siddharthan, M Dalzell, **K Grealis**, E Gonzalez, A Wanner. (2023). Accuracy and reproducibility of plethysmographic thoracic gas volume measurements in healthy subjects. *American Thoracic Society*. A41. Emerging Clinical and Translational Research in COPD and Alpha-1-Antitrypsin. A1555-A1555.
6. R Rovinsky, **K Grealis**, N Kumar, M Velasquez Duran, S Patel, T Ferriera, HB Gershengorn, C Mallow. (2023). Hemodynamic variations are associated with increased likelihood of discrepancy between pulse oximeter and directly measured oxygen saturation. *American Thoracic Society*.

SOFTWARE & OTHER WORKS

R Packages (CRAN)

1. **Grealis, K.** (2025). *sumExtras*: Convenience functions to produce publication quality tables in R. <https://cran.r-project.org/package=sumExtras>. doi: 10.32614/CRAN.package.sumExtras
2. **Grealis, K.** (2025). *froggerR*: Enhancing reproducibility in Quarto by providing structured templates and methods of reusing metadata across projects. <https://cran.r-project.org/package=froggerR>. doi: 10.32614/CRAN.package.froggerR
3. **Grealis, K.**, Odom, G. (2024). *nascaR.data*: R data package with functions for exploring curated NASCAR datasets of race results and driver performance. <https://cran.r-project.org/package=nascaR.data>. doi: 10.32614/CRAN.package.nascaR.data
4. Balise, R., Odom, G., **Grealis, K.**, Cardozo, F. (2022). *rUM*: R templates from the University of Miami. <https://cran.r-project.org/package=rUM>

Web Applications

5. **Grealis, K.** (2024). *EpiMatch*: An automated case-control matching tool for epidemiological studies useful in bias reduction and time management. <https://kylegrealis.shinyapps.io/case-control-matching/>
6. **Grealis, K.** (2024). *PowerViz*: A statistical power calculator and visualization tool written in R Shiny. <https://kylegrealis.shinyapps.io/powerViz/>

Presentations

7. Tombelson, A., **Grealis, K.**, Otvos, T., Kirkness, J.P., Fouras, A., Punjabi, N.M., Siddharthan, T. (2023). Validation of x-ray velocimetry with pneumotachograph to assess respiratory physiology. *Young Scientists' Forum*. Oral presentation. (May 2023).

8. **Grealis, K.** (2023). Customizable SAS macro program for case-control matching. *Graduate + Postdoctoral Research Symposium*. University of Miami, Miami, FL. (March 23, 2023).

RESEARCH EXPERIENCE

Pulse Oximetry Bias in Hospitalized Patients

PI: Christopher M. Mallow, MD | 10/2022–present | IRB20220093 | Role: Data analysis and statistics

ENDS: E-Cigarette and Vascular Diseases

PI: Adam Wanner, MD | 08/2022–present | IRB20211060 | Role: Data collection/management; data analysis and statistics; behavioral assessment

Airway Blood Flow as an Expression of Airway Inflammation in Cystic Fibrosis

PI: Maria Tupayachi Ortiz, MD | 06/2022–present | IRB20220600 | Role: Lab testing

Early Detection of Vaping-related Vascular Disease

PI: Michael Campos, MD | 02/2022–present | IRB20211060 | Role: Data collection/management; data analysis and statistics; behavioral assessment

Effect of Abdominal Gas on Body Plethysmography Measurement of Thoracic Gas Volume

PI: Trishul Siddharthan, MD | 12/2021–07/2022 | IRB20210336 | Role: Data collection

Follow-up Study on Adverse Airway Effects of Inhaled Nicotine from Tobacco and E-cigarettes

PI: Michael Campos, MD | 08/2020–11/2020 | IRB20210416 | Role: Study coordinator

CERTIFICATIONS & LICENSES

2025 CITI Program — Good Clinical Practice, Biomedical Researchers, Conflict of Interest

2022 SAS Certified Statistical Business Analyst Using SAS 9: Regression and Modeling

2022 DataCamp — Data Scientist with R Track

2022 American Heart Association — Advanced Cardiac Life Support

2022 American Heart Association — Basic Life Support

2021 Florida DOH — Registered Respiratory Therapist

2021 SAS 9.4 Base Programming Certification

2021 SAS Certified Associate: Programming Fundamentals

2021 American Heart Association — Pediatric Advanced Life Support

2019 NBRC — Registered Respiratory Therapist

2012 American Heart Association — Basic Life Support Instructor

2004–2019 Florida DOH — Certified Respiratory Therapy Technician

2003 NJ State Board of Respiratory Care — Certified Respiratory Therapy Technician

2003 NBRC — Certified Respiratory Therapy Technician

PROFESSIONAL & HONORARY ORGANIZATIONS

2022: Delta Omega, Beta Sigma Chapter — Honor Society for Graduate Studies in Public Health

2020: International Society of Sports Nutrition, Student Member

2020: National Honor Society

2020: SALUTE Veterans Honor Society (Purdue University Global Chapter)

HONORS & AWARDS

2023 University of Miami — Summa Cum Laude

2023 University of Miami — Graduate + Postdoctoral Research Symposium, Poster Winner (Health & Life Sciences)

2020 Purdue University Global — Summa Cum Laude

2020 Purdue University Global — Chancellor's List (four consecutive semesters)

2019 Physicians Regional Medical Center — Employee of the Month (April)

2019 Department of the Army — Army Achievement Medal: distinguished service with 101st Airborne Division

2016 Department of the Army — Leadership Award, Basic Leadership Course

2016 Department of the Army — Distinguished Honor Graduate

2009 Physicians Regional Medical Center — Employee of the Quarter (October)

2002 Rutgers University (f.k.a. UMDNJ) — Clinical Excellence Award