

# Kyle Edward Grealis

Lead Data Analyst / Biostatistician

Department of Public Health Sciences, University of Miami Miller School of Medicine

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*Updated: February 2026*

## EDUCATION

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### **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

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### **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/GRAFPH, 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

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**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

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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

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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

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### 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). *froggeR*: Enhancing reproducibility in Quarto by providing structured templates and methods of reusing metadata across projects. <https://cran.r-project.org/package=froggeR>. doi: 10.32614/CRAN.package.froggeR
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

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### **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

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**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

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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

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- 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