

CURRICULUM VITAE

Kyle Edward Grealis

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PERSONAL

- *Name:* Kyle Edward Grealis
- *Phone:* (239)628-7442
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- *ORCID:* 0000-0002-9223-8854
- *Current Job Title:* Lead Data Analyst
- *Primary Department:* Department of Pulmonary, Critical Care and Sleep Medicine, University of Miami Miller School of Medicine, Miami, Florida

HIGHER EDUCATION

- 2023: **M.S. in Biostatistics**, Department of Public Health Sciences, University of Miami Miller School of Medicine, Miami, Florida; Summa Cum Laude
- 2020: **B.S.**, Health Sciences, Purdue University Global, West Lafayette, Indiana; Summa Cum Laude
- 2002: **A.A.S.**, Respiratory Therapy, Rutgers University (f.k.a. University of Medicine and Dentistry of New Jersey), Stratford, New Jersey

EXPERIENCE

Academic:

- 2023-present: **Lead Research Analyst**; University of Miami, Miami, Florida: implementation of machine learning models on population health studies; development of data pipelines beginning with REDCap to the terminal user; development of data visualization and Shiny web application and website development; coauthoring R packages that aide in the performance of data science tasks
- 2022-2023: **Bioinformatics Analyst**; University of Miami, Miami, Florida: performed data cleaning, exploratory analysis, and applied statistical modeling techniques for international pulmonary research studies; contributed to the development of statistical analysis plans; presented visual and oral analytic reports to research teams and international stakeholders; contributed to academic manuscripts and abstracts for peer-reviewed publication and presentation; incorporated SAS/STAT, SAS/GRAPH, and SAS/MACRO along with R in all phases of the analytic process; authored or coauthored academic abstracts; develop SAS/MACRO for case-control matching to be presented March; performed pulmonary function testing in accordance with American Thoracic Society protocols; ensured quality control standards for pulmonary function testing and lung clearance devices
- 2019-2022: **Senior Respiratory Therapist**; University of Miami, Miami, Florida: performed pulmonary function testing, assisted with rigid and fiberoptic bronchoscopy with endobronchial ultrasound, and developed patient in-patient and out-patient plan of care; coordinated home rehabilitation therapies.
- 2004-2019: **Registered Respiratory Therapist**; Physicians Regional Medical Center, Naples, Florida: Clinical Coordinator, critical care evaluation and planning, new employee and student preceptorship, basic life support (BLS) instructor
- 2003-2004: **Certified Respiratory Therapist**; Kennedy Health Systems, Stratford, New Jersey
- 1998-2003: **Pharmacy Technician**; Kennedy Health Systems, Stratford, New Jersey

Military:

- 2017-2020: **Equal Opportunity Leader**; United States Army Reserve, Cape Coral, Florida; 365 Engineer Company (SAPPER)
- 2016-2020: **Squad Leader**; United States Army Reserve, Cape Coral, Florida; 365 Engineer Company (SAPPER)

PUBLICATIONS & ABSTRACTS

- 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.
- 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).
- 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.
- 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
- 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.
- 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.
- 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.
- 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.
- 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*.

OTHER WORKS

- 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).
- Grealis, K.** (2023). Customizable SAS macro program for case-control matching. *Graduate + Postdoctoral Research Symposium*. University of Miami, Miami, Florida. (March 23, 2023).
- Balise, R., Odom, G., **Grealis, K.**, Cardozo, F. (2022). rUM: R templates from the University of Miami. Available from <https://CRAN.R-project.org/package=rUM>.

PROFESSIONAL

- *Research Performed:*

Pulse Oximetry Bias in Hospitalized Patients

Principal Investigator: Christopher M. Mallow, MD

Period: 10/2022-present

Agency: University of Miami, IRB20220093

Role: Data analysis and statistics

ENDS: E-Cigarette and vascular diseases

Principal Investigator: Adam Wanner, MD

Period: 08/2022-present

Agency: University of Miami, IRB20211060

Role: Data collection and management; data analysis and statistics; Medical, social and/or behavioral assessment

Airway Blood Flow as an expression of airway inflammation in Cystic Fibrosis: A correlate of respiratory function?

Principal Investigator: Maria Tupayachi Ortiz, MD

Period: 06/2022-present

Agency: University of Miami, IRB20220600

Role: Lab testing

Early Detection of Vaping-related Vascular Disease

Principal Investigator: Michael Campos, MD

Period: 02/2022-present

Agency: University of Miami, IRB20211060

Roles: Data collection and management; data analysis and statistics; medical, social and/or behavioral assessment

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

Principal Investigator: Trishul Siddharthan, MD

Period: 12/2021-07/2022

Agency: University of Miami, IRB20210336

Role: Data collection

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

Principal Investigator: Michael Campos, MD

Period: 8/2020-11/2020

Agency: University of Miami, IRB20210416

Role: Study coordinator

- *Certifications and Licensures:*

2023: CITI Program; Good Clinical Practice, Group 1: Biomedical Researchers, Conflict of Interest

2022: SAS Global Certification Program; Certified Statistical Business Analyst Using SAS 9: Regression and Modeling

2022: DataCamp, Inc.; Data Scientist with R Track

2022: American Heart Association; Advanced Cardiac Life Support

2022: American Heart Association; Basic Life Support

2021: Florida Department of Health; Registered Respiratory Therapist

2021: SAS Global Certification Program; SAS 9.4 Base Programming

2021: SAS Global Certification Program; SAS Certified Associate: Programming Fundamentals

2021: American Heart Association; Pediatric Advanced Life Support

2019: National Board of Respiratory Care; Registered Respiratory Therapist

2012: American Heart Association: Basic Life Support Instructor

2004-2019: Florida Department of Health; Certified Respiratory Therapy Technician

2003: New Jersey State Board of Respiratory Care; Certified Respiratory Therapy Technician

2003: National Board of Respiratory Care; Certified Respiratory Therapy Technician

- *Professional and Honorary Organizations:*

2022: Delta Omega, University of Miami, 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 and 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: for distinguished service while serving joint operations with the 101st Airborne Division
2016: Department of the Army; Leadership Award: during Basic Leadership Course (June)
2016: Department of the Army; Distinguished Honor Graduate
2009: Physicians Regional Medical Center; Employee of the Quarter (October)
2002: Rutgers University (f.k.a. University of Medicine and Dentistry of New Jersey); Clinical Excellence Award