



Doctoral Dissertation Defense Announcement



Olaitan Joel Akinboboye, MD, MPH

“Understanding the Contribution of Social Determinants of Health to Glycemic Control in African Americans with Criminal Legal Involvement and Type 2 Diabetes”

Candidate for Doctor of Philosophy in Public and Community Health Division of Epidemiology and Social Sciences, Institute for Health and Equity
School of Graduate Studies
Medical College of Wisconsin

Committee in Charge:

Rebekah J. Walker, PhD (Chair)
Leonard E. Egede, MD, MS
Joni S. Williams, MD, MPH
Laura C. Hawks, MD, MPH
Jennifer A. Campbell, PhD, MPH

Date: Friday, April 12, 2024

Time: 12:00 PM (CST)

Defense Location: Conference Rooms 1 & 2 at Research Park Center

Public viewing to be held virtually at: <https://mcw-edu.zoom.us/j/91233448978?pwd=WS9wajhVWmtsUGUrNm0rSmFpTmp5Zz09>

Meeting ID: 912 3344 8978 **Passcode:** c0tH019L

Graduate Studies:

Introduction to Epidemiology
Community Health Improvement I
Intro to Statistical Analysis
Qualitative and Mixed Methods
Regression Analysis
Qualitative Data Analysis
Community Health Improvement II
Community Health Improvement III
Community Health Improvement IV
Survey Research Methods
Infectious Disease Epidemiology
Health and Forced Migration
Health and Medical Geography
Doctoral Seminar
Ethics & Integrity in Science
Reading and Research
Research Ethics Discussion Series

Dissertation

“Understanding the Contribution of Social Determinants of Health to Glycemic Control in African Americans with Criminal Legal Involvement and Type 2 Diabetes”

Approximately 38.4 million people, or 11.6% of the US population, live with diabetes. Social determinants of health (SDOH) are conditions in the environment where people are born, live, work, play, and age that affect a wide range of health, functioning, and quality of life. Criminal legal involvement, defined as being legally convicted of a crime, extends beyond the confines of the justice system, affecting various aspects of individuals' lives and their health outcomes for conditions such as type 2 diabetes. The layered effect of a high burden of criminal legal involvement and diabetes may predispose individuals to poor diabetes outcomes. The collateral effects of criminal legal involvement, including limited access to healthcare, food insecurity, housing instability, and poor social ties, can adversely affect glycemic control in adults with diabetes. Aside from the documented direct effect of criminal legal involvement on health outcomes, limited literature has explored the role of SDOH on health outcomes in individuals with a history of criminal legal involvement and non-communicable chronic diseases such as type 2 diabetes. This cross-sectional study sought to explore the contributions of SDOH on glycemic control among a sample of 171 African American adults with a history of criminal legal involvement and type 2 diabetes living in Southeastern Wisconsin. A comprehensive set of validated survey measures was used to collect information on SDOH during pre-incarceration (locus of control, adverse childhood experiences), incarceration (length of sentence, type of conviction, quality of correctional care), and post-release (social support, perceived discrimination, perceived stress, serious psychological distress, health literacy, health care access, food insecurity, housing insecurity, neighborhood safety, social cohesion). A blood specimen was collected from participants and sent to the laboratory for processing each participant's hemoglobin A1c, the marker to assess glycemic control, on average, over the prior 3 months. A stepwise linear regression with forward selection model was run to explore the association between SDOH and glycemic control during pre-incarceration, incarceration, and post-release. This study showed no relationship between SDOH and glycemic control during pre-incarceration, incarceration, or post-release for African American adults with type 2 diabetes in this sample. However, there was an association between sociodemographic, clinical, and criminal justice factors by age, insurance status, comorbidity, type of medication, and drug crime. In conclusion, the results of this study will provide guidance for designing future research aimed at improving glycemic control among African American adults with a history of criminal legal involvement and type 2 diabetes.

OLAITAN J. AKINBOBOYE
Public and Community Health
Medical College of Wisconsin
Email: okinboboye@mcw.edu
Phone: (414)-252-3102

October 2023

EDUCATION:

- 4/2024 (anticipated) PhD, Public and Community Health
Medical College of Wisconsin, Milwaukee, WI
Dissertation Title: "Understanding the Contribution of Social Determinants of Health to Glycemic Control in African American Adults with Criminal Legal Involvement and Type 2 diabetes Mellitus"
Dissertation Advisor: Rebekah Walker, PhD
- 05/2029 MPH, Epidemiology
Zilber School of Public Health, University of Wisconsin-Milwaukee, WI
- 08/2012 MD
Obafemi Awolowo University Ile-Ife, Osun state, Nigeria

POSTGRADUATE MEDICAL TRAINING:

- 06/2023 – Present Resident Physician, Western Michigan University Homer Stryker MD School of Medicine, Kalamazoo, MI

RESEARCH EXPERIENCE:

- 2018 - 2023 Graduate Research Assistant
Center for Advancing Population Science, Milwaukee, WI, United States of America

WORK EXPERIENCE:

- 2013 – 2014 Intern Medical Officer, Ekiti State University Teaching Hospital, Ado Ekiti, Nigeria
- 2014 – 2015 Medical Officer, Ikire General Hospital, Osun State, Nigeria
- 2015 – 2017 Medical Officer, Welfare Hospital, Ibadan, Oyo State, Nigeria

PROFESSIONAL AFFILIATIONS

- 2012 – Present Nigerian Medical Association (NMA)
- 2018 – Present American Public Health Association (APHA)
- 2018 – Present Wisconsin Public Health Association (WPHA)
- 2022 – Present American College of Physician (ACP)
- 2023 – Present American Medical Association (AMA)

PROFESSIONAL/VOLUNTEER SERVICE

2023	Reviewer, <i>BMJ Open</i>
2022	Reviewer, <i>American Journal of Medicine Open</i>
2022	Reviewer, <i>PLOS ONE</i>
2022	Reviewer, <i>Journal of Racial and Ethnic Health Disparities</i>
2021	Reviewer, <i>Journal of BMC Endocrine Disorders</i>
2020	Reviewer, <i>Scientific Reports Journal</i>

PEER-REVIEWED PUBLICATIONS

1. **Akinboboye O**, Egede, LE, Thogerson A, Williams JS. Gender differences in the relationship between financial barriers and emergency department visits due to diabetes. *Diabetes*, 71(Supplement_1), 2022;607-P.
2. Olukotun O, Williams JS, Zhou Z, **Akinboboye O**, Egede LE. The association between history of incarceration and heart disease: Adults from the 1979 National Longitudinal Survey of Youth. *Health Place*. 2022;75:102808. doi: 10.1016/j.healthplace.2022.102808.
3. **Akinboboye O**, Williams JS, Garacci E, Egede, LE. Relationship between C-reactive protein and mortality in adults with diabetes: Influences of demographic characteristics, lifestyle behaviors, and medications. *Nutrition, Metabolism, and Cardiovascular Disease*, 2022;32(1), 176-185.
4. Olatunya OS, Akintayo AA, Olofinbiyi B, Isinkaye AO, Ogundare EO, **Akinboboye O**. Pattern and medical care of child victims of sexual abuse in Ekiti, south-western Nigeria. *Pediatric Int Child Health*, 2013;33(4), 247-252.
5. Olukotun O, **Akinboboye O**, Williams JS, Ozieh M, Egede LE. Influences of Demographic, Social Determinants, Clinical, Knowledge, and Self-Care Factors on Quality of Life in Adults with Type 2 Diabetes. *Journal of Racial and Ethnic Health Disparities*, 2022;9(4), 1172-1183.
6. Olukotun O, Williams JS, Walker S, **Akinboboye OJ**, Egede LE. Racial differences in the contribution of sociodemographic, clinical, and self-care factors on glycemic control in adults with type 2 diabetes. *Diabetes*, 2020;69(Supplement_1), 744-P.
7. Williams JS, Lu K, **Akinboboye O**, Olukotun O, Zhou Z, Nagavally S, Egede LE. Trends in Obesity and Medical Expenditure among Women with Diabetes, 2008-2016: Differences by Race/Ethnicity. *Ethn Dis*. 2020;30(4):621-628. doi:10.18865/ed.30.4.621.
8. **Akinboboye O**, Williams JS, Olukotun O, Egede LE (2022) Differences by race in the associations between neighborhood crime and violence and glycemic control among adults with type 2 diabetes. *PLoS ONE* 17(12): e0279234. <https://doi.org/10.1371/journal.pone.0279234>.

9. Jue MD, Hawks LC, Walker RJ, **Akinboboye O**, Thorgerson A, Egede LE. The Associations Between Medical and Mental Health Conditions and Health Care Utilization in US Adults with Past-Year Criminal Legal Involvement. *J Gen Intern Med.* 2023 Aug 30. doi: 10.1007/s11606-023-08362-6. Epub ahead of print. PMID: 37648953.
10. **Akinboboye O**, Williams JS, Olukotun O, Egede LE. The Associations between Neighborhood factors and Quality of Life among Adults with Type 2 Diabetes Mellitus (under review).
11. **Akinboboye O**, Papadimitriou A, Bhandari S, Williams, JS, Egede LE. The Nexus of Structural Racism, Poverty, and Health Disparities: An Alarming Confluence for Minority Populations (in development).
12. Olukotun O, **Akinboboye O**, Egede LS, Williams, JS. Incremental effect of sociodemographic, psychosocial, neighborhood factors and clinical variables on cardiovascular risk control in adults with type 2 diabetes (under review).
13. Williams JS, Akinboboye O, Egede LS. Path analysis to assess the effect of health literacy on glycemic control in African American Adults with type 2 diabetes mellitus (in development).
14. **Akinboboye O**, Anne R, Thogerson A, Bhandari S, Egede LS, Williams JS. Gender differences in the relationship between social determinants of health and ED utilization among adults with type 2 diabetes (in development).

PRESENTATIONS:

- | | |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2022 | Akinboboye O , Egede LE, Thorgerson A, Williams JS. (2022, June 04). Sex differences in the relationship between financial barriers and emergency department visit due to diabetes. American Diabetes Association 82nd Scientific Annual Meeting /New Orleans, LA, USA. |
| 2021 | Williams, J. S., Zhou, Z., Akinboboye, O. , Olukotun, O., Egede, L. E. Trends in Obesity and Medical Expenditure among Women with Diabetes, 2008-2016: Differences by Race/Ethnicity. Presentation: MCW Center for The Advancement of Women in Science and Medicine (AWSM). |
| 2020 | Akinboboye, O., Williams, J., Olukotun, O., Egede, E. Racial Differences in the Relationship between Neighborhood Crime and Violence, and Glycemic Control in adults with diabetes: A Cohort from Southeastern United States. Presentation: 06 March 2020, 6th Department of Medicine Research Day Symposium, Medical College of Wisconsin, Milwaukee, Wisconsin. |
| 2020 | Olukotun, O., Walker, S., Akinboboye, O. , Williams, J., Egede, E. Racial Differences in the Contribution of Sociodemographic, Clinical, and Self Care Factors on Glycemic Control in Adults with Type 2 Diabetes. Presentation: American Diabetes Association 80th Scientific Annual Meeting; June 12-15, 2020; Chicago, IL (virtual due to COVID-19). |
| 2019 | Akinboboye, O. , Garracci, E., Williams, J. S., Egede, L. E. Relationship between C-Reactive Protein and Mortality in Adults with Diabetes: Influences of Demographic Characteristics, Lifestyle Behaviors and Medications. Presentation: March 2019, 5th Department of Medicine Research Day Symposium, Medical College of Wisconsin, Milwaukee, Wisconsin. |