



Reply to Spector and Iweala



From the Authors:

We thank Drs. Spector and Iweala for their interest in our recent report demonstrating lower continuous positive airway pressure (CPAP) adherence in communities with higher proportions of Black or Hispanic residents (1). Spector and Iweala argued that one cannot conclude from our analysis that Black and Hispanic people had lower CPAP adherence rates. We did not make this claim. Instead, we concluded that neighborhoods with greater *proportions* of Black or Hispanic residents have lower rates, a conclusion that Spector and Iweala acknowledge is supported by our data.

A further concern was raised that, in our quintile analysis, the highest quintile for minority prevalence was 25–100%, which, they argue, suggests that the vast majority of residents in such neighborhoods are white. In fact, the mean proportion of minority residents across the zip-code tabulation areas in this category was 48% in both the Black and Hispanic neighborhood analyses. Furthermore, our secondary analyses that modeled the proportion of Black and Hispanic residents as continuous variables led to very similar conclusions.

Spector and Iweala argued for a comparison of residents from communities that are 99% white with those that are 99% Black to assess whether racial disparities exist. Such an analysis would be unrepresentative of individual racial differences because most Black (and Hispanic) Americans do not live in such highly segregated neighborhoods.

Overall, Spector and Iweala appear singularly focused on individual-level differences, but we believe that such a focus limits the ability to fully understand how structural racism produces health disparities. Evidence suggests that discrimination at multiple levels contributes to many health disparities (2). A primary goal of our work was to investigate the association between neighborhood-level exposures and CPAP adherence, given evidence that differences in social and physical environments are important drivers of racial health disparities due to the legacy of residential segregation (3, 4). Our results support the contention that neighborhood-level factors contribute to disparities in CPAP adherence and highlight the importance of identifying and addressing community-level barriers—rather than solely focusing on the individual—to achieve health equity in sleep medicine (5). ■

Author disclosures are available with the text of this letter at www.atsjournals.org.

Ⓒ This article is open access and distributed under the terms of the Creative Commons Attribution Non-Commercial No Derivatives License 4.0. For commercial usage and reprints, please e-mail Diane Gern.

Supported by a grant from Philips Respironics, the American Thoracic Society Academic Sleep Pulmonary Integrated Research/Clinical Fellowship, and NIH grants HL127307 and HL082610. S.R.P. has received grant funding through his university from Bayer Pharmaceuticals, Philips Respironics, and Respicardia. S.M.N. has received grant funding through his university from Philips Respironics.

Originally Published in Press as DOI: 10.1164/rccm.202104-1030LE on June 2, 2021

Hispanic Americans, and we appreciate the discussion of all these factors as they contribute to disparities.

Unfortunately, as designed, this study does not answer the question about racial health disparities in continuous positive airway pressure (CPAP) adherence; thus, we object to the authors' conclusion that "our findings extend results from earlier studies which have reported consistently that Black patients have lower CPAP usage than White patients." The authors go on to conclude that they have "observed racial and ethnic differences in adherence," but they have not done so with the reported data. Although their conclusions about the differences in the neighborhoods may be valid, this study does not address racial or ethnic differences in adherence and should not be interpreted as evidence that Black and Hispanic patients are less adherent to CPAP.

This study compares neighborhoods that are <1% Black or Hispanic with those that are >25% Black or Hispanic. In other words, it compares majority non-Hispanic White neighborhoods with other majority non-Hispanic White neighborhoods. Given that the populations in these "minority" neighborhoods could be up to 74% non-Hispanic White, any findings from this study are more likely to reflect differences in the behavior of non-Hispanic White people than they are Hispanic or Black people. Based on the data presented in this study, it is equally logical to conclude that non-Hispanic White people who live among higher concentrations of Black and/or Hispanic neighbors are less likely to adhere to CPAP. It is the authors' assumption of disadvantage and healthcare "mistrust" that leads them to assume it is the CPAP usage by the Black and Hispanic patients rather than by the White patients that accounts for their findings.

To learn about racial differences in CPAP adherence, we suggest including comparisons with neighborhoods that are at least 50% Black or Hispanic, preferably percentages that mirror the percentages of White people (e.g., comparing neighborhoods that are 99% White with those that are 99% Black). Otherwise, it is inappropriate to make conclusions about the behaviors of Black and Hispanic patients by comparing two populations in which they are significant minorities. ■

Author disclosures are available with the text of this letter at www.atsjournals.org.

Andrew R. Spector, M.D.*
Duke University Medical Center
Durham, North Carolina

Onyinye I. Iweala, M.D., Ph.D.
University of North Carolina at Chapel Hill
Chapel Hill, North Carolina

ORCID IDs: 0000-0003-4645-1205 (A.R.S.); 0000-0001-7470-7904 (O.I.I.).

*Corresponding author (e-mail: andrew.spector@duke.edu).

Reference

1. Borker PV, Carmona E, Essien UR, Saeed GJ, Nourai SM, Bakker JP, et al. Neighborhoods with greater prevalence of minority residents have lower CPAP adherence. *Am J Respir Crit Care Med* 2021;204:339–346.

Copyright © 2021 by the American Thoracic Society

Priya V. Borker, M.D.*
 Emely Carmona, B.S.
 Utibe R. Essien, M.D.
 Gul Jana Saeed, M.B. B.S.
 S. Mehdi Nouraie, M.D., Ph.D.
*University of Pittsburgh
 Pittsburgh, Pennsylvania*

Jessie P. Bakker, M.S., Ph.D.
 Christy J. Stitt, M.S.
 Mark S. Aloia, Ph.D.
*Philips Respironics
 Monroeville, Pennsylvania*

Sanjay R. Patel, M.D., M.S.
*University of Pittsburgh
 Pittsburgh, Pennsylvania*

ORCID IDs: 0000-0002-3957-7363 (P.V.B.); 0000-0002-9142-5172 (S.R.P.)

*Corresponding author (e-mail: borkerpv@upmc.edu).

References

1. Borker PV, Carmona E, Essien UR, Saeed GJ, Nouraie SM, Bakker JP, *et al*. Neighborhoods with greater prevalence of minority residents have lower CPAP adherence. *Am J Respir Crit Care Med* 2021;204:339–346.
2. Gee GC. A multilevel analysis of the relationship between institutional and individual racial discrimination and health status. *Am J Public Health* 2002;92:615–623.
3. Williams DR, Collins C. Racial residential segregation: a fundamental cause of racial disparities in health. *Public Health Rep* 2001;116:404–416.
4. Gee GC, Payne-Sturges DC. Environmental health disparities: a framework integrating psychosocial and environmental concepts. *Environ Health Perspect* 2004;112:1645–1653.
5. Billings ME, Cohen RT, Baldwin CM, Johnson DA, Palen BN, Parthasarathy S, *et al*. Disparities in sleep health and potential intervention models: a focused review. *Chest* 2021;159:1232–1240.

Copyright © 2021 by the American Thoracic Society



Erratum: Patient-centered Outcomes Research in Interstitial Lung Disease: An Official American Thoracic Society Research Statement

There was an error in the American Thoracic Society research statement published in the July 15, 2021 issue of the *Journal* (1). One of the coauthor's names was inadvertently included without the middle initial; the name should have appeared as "Toby M. Maher, M.D., Ph.D." For the convenience of our

readers, *AJRCCM* is replacing the online version of the article with a corrected version. ■

Reference

1. Aronson KI, Danoff SK, Russell AM, Ryerson CJ, Suzuki A, Wijsenbeek MS, *et al*. Patient-centered outcomes research in interstitial lung disease: an official American Thoracic Society research statement. *Am J Respir Crit Care Med* 2021;204:e3–e23.

Copyright 2021 by the American Thoracic Society