

EDITED BY

IRENE DANKWA-MULLAN, MD, MPH

ELISEO J. PÉREZ-STABLE, MD

KEVIN L. GARDNER, MD, PhD

XINZHI ZHANG, MD, PhD, FACE, FRSM

ADELAIDA M. ROSARIO, PhD



THE SCIENCE OF HEALTH DISPARITIES RESEARCH



WILEY Blackwell

Table of Contents

[Cover](#)

[Title Page](#)

[Copyright Page](#)

[List of Contributors](#)

[Foreword](#)

[Acknowledgements](#)

[1 Definitions, Principles, and Concepts for Minority Health and Health Disparities Research](#)

[1.1 Introduction](#)

[1.2 NIMHD Mission](#)

[1.3 Definitions and Concepts of Minority Health and Health Disparities](#)

[1.4 The NIMHD Research Framework: Health Determinants in Action](#)

[1.5 Inclusion of Diverse Participants in Clinical Research](#)

[1.6 Conclusions](#)

[1.7 Key Points](#)

[Disclaimer](#)

[References](#)

[2 Getting Under the Skin Pathways and Processes that Link Social and Biological Determinants of Disease](#)

[2.1 Introduction](#)

[2.2 Allostasis and Allostatic Load](#)

[2.3 The HPA Axis](#)

[2.4 Anticipatory Biology and Behavior: The Embedding of Exposures Across the Life Course](#)

[2.5 Sleep](#)

[2.6 How We Feed: Nutrition and Nutrition-related Health Disparities](#)

[2.7 How We Feel: Mood and Depression](#)

[2.8 Summary](#)

[2.9 Key Points](#)

[Disclaimer](#)

[References](#)

[3 Racial/Ethnic, Socioeconomic, and Other Social Determinants](#)

[3.1 Introduction](#)

[3.2 Introduction to the Topic, Including Key Definitions](#)

[3.3 Used and Recommended Measures and Research Methods](#)

[3.4 How and Why this Topic is Important to Minority Health and Health Disparities Research](#)

[3.5 Selected Examples of the State of the Science in the Field to Illustrate Best Practices](#)

[3.6 Challenges and Future Opportunities](#)

[3.7 Summary](#)

[3.8 Key Points](#)

[Disclaimer](#)

[References](#)

[4 Behavioral Determinants in Population Health and Health Disparities Research](#)

[4.1 Introduction](#)

[4.2 Importance of Behavioral Determinants to Minority Health and Health Disparities Research](#)

[4.3 Relevant Metrics and Research Methods](#)

[4.4 State of the Science: Promising Practices](#)

[4.5 Challenges and Future Opportunities](#)

[4.6 Summary](#)

[4.7 Key Points](#)

[Disclaimer](#)

[References](#)

[5 Sociocultural Environments and Health Disparities Research Frameworks, Methods, and Promising Directions](#)

[5.1 Introduction](#)

[5.2 Selected Overarching Sociocultural Environment Factors](#)

[5.3 Social Capital and Health Disparities](#)

[5.4 Implicit Bias of Healthcare Providers](#)

[5.5 Sociocultural Factors that Influence the Quality of Healthcare Provider-Patient Interactions and Communication](#)

[5.6 Synthesis](#)

[5.7 Key Points](#)

[Disclaimer](#)

[References](#)

[6 Physical Environment, and Minority Health and Health Disparities Research](#)

[6.1 Introduction](#)

[6.2 Methodologies and Measures](#)

[6.3 Importance of Physical Environment Determinants to Health Disparities Research](#)

[6.4 Case Study](#)

[6.5 Challenges and Opportunities](#)

[6.6 Key Points](#)

[Disclaimer](#)

[References](#)

[7 Genome-wide Genetic Approaches to Metabolic and Inflammatory Health Disparities](#)

[7.1 Introduction](#)

[7.2 Landscape of Genetic Variation](#)

[7.3 Pathogenic Potential of Low-frequency and Rare Variants](#)

[7.4 Admixture in the Americas](#)

[7.5 Identifying Disease Genes Associated with Health Disparities: Methods and Approaches](#)

[7.6 Joint Admixture Mapping and Genome-wide Association Studies for Gene Discovery in Admixed Populations](#)

[7.7 Whole-Genome and Whole-Exome Sequencing Approaches to Health Disparities](#)

[7.8 Summary](#)

[7.9 Key Points](#)

[Definitions](#)

[Disclaimer](#)

[References](#)

[8 Biologic Factors and Molecular Determinants in Inflammatory and Metabolic Diseases](#)

[8.1 Introduction and Approaches](#)

[8.2 Asthma](#)

[8.3 Metabolic Syndrome, Obesity, and Diabetes](#)

[8.4 Lupus and Other Rheumatologic Diseases](#)

[8.5 Kidney Disease](#)

[8.6 Key Points](#)

[Disclaimer](#)

References

9 Insights into the Genomic Landscape of African Ancestry Populations Implications for Health and Disease Disparities

9.1 Introduction: Viewing the Complex Architecture of African Genomes from a Global Perspective

9.2 Adaptive Forces that Shaped the Human Genome in Health and Disease among African Ancestry Populations

9.3 Pharmacogenomics

9.4 Considerations for Future Studies

9.5 Conclusions

9.6 Key Points

Disclaimer

References

10 Applying Self-report Measures in Minority Health and Health Disparities Research

10.1 Introduction

10.2 Measurement Issues When Using Self-report Measures in Diverse Populations

10.3 Methods for Evaluating Conceptual and Psychometric Properties of Self-report Measures

10.4 Locating and Selecting Self-report Measures for Use in Diverse Populations

10.5 Adapting Measures for Diverse Populations

10.6 Future Directions

10.7 Conclusions

10.8 Key Points

Disclaimer

References

11 Conducting Community-based Participatory Research with Minority Communities to Reduce Health Disparities

11.1 Introduction

11.2 Conducting Community-based Participatory Research with Minority Communities to Reduce Health Disparities

11.3 Evidence of CBPR Effectiveness and Advancement in CBPR Evaluation

11.4 Case Studies

11.5 Anticipating Challenges and Opportunities in CBPR

11.6 Research Support for CBPR

11.7 Conclusions

11.8 Key Points

Disclaimer

References

12 Racial/Ethnic Health and Healthcare Disparities Measurement: The Application of the Principles and Methods of Causal Inference

12.1 Introduction

12.2 Aligning Definitions of Disparity with Appropriate Statistical Methods

12.3 A Method of Measuring Healthcare Disparities Incorporating a “Counterfactual” Scenario

12.4 Extending the Use of “Partial Differencing” to Identifying Targets for Health and Healthcare Disparities Reduction Using Decomposition Methods

12.5 Adapting Causal Models to Identify Interventions to Reduce Racial/Ethnic Health

[Disparities](#)

[12.6 Investigating the Meaning of the Race/Ethnicity Coefficient in Regression Models](#)

[12.7 Statistical Methods Used to Evaluate Causal Effects in Intervention Studies](#)

[12.8 Conclusion and Limitations](#)

[12.9 Key Points](#)

[Disclaimer](#)

[References](#)

[13 Small Area Estimation and Bayesian Disease Mapping for Minority Health and Health Disparities](#)

[13.1 Introduction](#)

[13.2 Basic Statistical Models for Small Area Estimation](#)

[13.3 Small Area Estimation: A Brief Practical Guide](#)

[13.4 Small Area Estimation for Quantifying Health and Health Disparities of Small Populations](#)

[13.5 Bayesian Disease Mapping](#)

[13.6 Conclusions](#)

[13.7 Key Points](#)

[Disclaimer](#)

[Acknowledgments](#)

[References](#)

[Further Reading](#)

[14 Applications of Big Data Science and Analytic Techniques for Health Disparities Research](#)

[14.1 Introduction](#)

[14.2 Characteristics of Big Data](#)

[14.3 Importance of Big Data for Minority Health and Health Disparities Research](#)

[14.4 Goals of Big Data Analytics and Opportunities for Health Disparities Research](#)

[14.5 Research Methods in Big Data](#)

[14.6 Selected Examples Illustrating Best Practices](#)

[14.7 Challenges and Opportunities on Big Data Approaches in Health Disparities Research](#)

[14.8 Summary and Conclusion](#)

[14.9 Key Points](#)

[Disclaimer](#)

[References](#)

[15 Complex Systems Science](#)

[15.1 Introduction](#)

[15.2 Unique Properties of Minority Health and Health Disparities Research](#)

[15.3 Data and Methodological Challenges in Health Disparities Research](#)

[15.4 Strong Alignment Between Hypothesized Causes of Minority and Health Disparities and Complex Systems Science Approaches](#)

[15.5 Types of Questions that Complex Adaptive Systems Models Can Help Answer](#)

[15.6 Elements of a Successful Complex Adaptive Systems Model](#)

[15.7 Systems Science as Iterative Research](#)

[15.8 Limitations and Challenges](#)

[15.9 Key Points](#)

[Disclaimer](#)

[References](#)

[16 Improving Equity in Healthcare through Multilevel Interventions](#)

[16.1 What Are Multilevel Interventions?](#)

[16.2 Challenges of Multilevel Interventions](#)

[16.3 Multilevel Interventions: 2012-2017](#)

[16.4 Future Directions](#)

[16.5 Case Study to Illustrate Multilevel Interventions](#)

[16.6 Key Points](#)

[Disclaimer](#)

[References](#)

[17 Using Implementation Science to Move from Knowledge of Disparities to Achievement of Equity](#)

[17.1 Introduction](#)

[17.2 Selected Implementation Frameworks Applied to Health Disparities Research](#)

[17.3 Best Practices in Health Disparities Implementation Science: Selected Examples](#)

[17.4 Challenges and Opportunities for Implementation Science in Health Disparities Research](#)

[17.5 Summary and Implications for Future Research, Practice, Policy, and Social Change](#)

[17.6 Key Points](#)

[Disclaimer](#)

[References](#)

[18 Healthcare and Public Policy: Challenges and Opportunities for Research](#)

[18.1 Summary](#)

[18.2 Background/Context](#)

[18.3 Key Constructs](#)

[18.4 Selected Examples of Healthcare Policy Research](#)

[18.5 Non-Healthcare Policy Research](#)

[18.6 Key Challenges](#)

[18.7 Future Directions and Opportunities](#)

[18.8 Key Points](#)

[Disclaimer](#)

[References](#)

[19 Addressing Disparities in Access to High-quality Care](#)

[19.1 Racial Disparities as a Quality Problem](#)

[19.2 Defining Quality and Access](#)

[19.3 Examples of Racial Disparities as a Quality Problem](#)

[19.4 Addressing Disparities in Access to Quality Care](#)

[19.5 Steps to Addressing Healthcare Disparities](#)

[19.6 Implement Evidence-based Strategies to Eliminate Disparities](#)

[19.7 Invest in Health Equity Performance Measures](#)

[19.8 Incentivize the Reduction of Health Disparities](#)

[19.9 Advice for a Healthcare Disparities Researcher](#)

[19.10 Conclusion](#)

[19.11 Key Points](#)

[Disclaimer](#)

[References](#)

[20 Health Communication as a Mediator of Health and Healthcare Disparities](#)

[20.1 Introduction: Scope and Conceptual Framework](#)

[20.2 Risk Factors for Health Communication Disparities and Impact on Communication and Health Outcomes](#)

[20.3 An Example of Systems-based Approaches: Creating Health-Literate Healthcare Systems](#)

[20.4 Interventions to Mitigate Other Communication Risk Factors](#)

[20.5 Future Directions for Communications Research: Measurement and Implementation](#)

[20.6 Key Points](#)

[Disclaimer](#)

[References](#)

[21 Comparative Effectiveness Research in Health Disparity Populations](#)

[21.1 Introduction](#)

[21.2 Background](#)

[21.3 CER Study Designs](#)

[21.4 CER Measures](#)

[21.5 Approaches to CER](#)

[21.6 Applications of CER in Health Disparity Populations](#)

[21.7 Social Determinants of Health](#)

[21.8 Groups with Particular Needs for CER](#)

[21.9 Major Public Health/Policy Interventions as a Result of CER](#)

[21.10 Multisectoral Impact of CER on Disparities](#)

[21.11 Future Directions of CER](#)

[21.12 Key Points](#)

[Disclaimer](#)

[References](#)

[22 The Role of Electronic Health Records and Health Information Technology in Addressing Health Disparities](#)

[22.1 Introduction](#)

[22.2 Healthcare Data and Electronic Records](#)

[22.3 Overview of Health Information Technologies](#)

[22.4 Application of Digital Health and Health Information Technologies to Addressing Disparities](#)

[22.5 Conclusions: Challenges and Opportunities in Health Information Technologies Implementation](#)

[22.6 Key Points](#)

[Acknowledgments](#)

[Disclaimer](#)

[References](#)

[23 Precision Medicine and Health Disparities](#)

[23.1 The Promise of Precision Medicine](#)

[23.2 Methods in Precision Medicine and Applications in Health Disparities](#)

[23.3 Future Directions and Research Needs](#)

[23.4 Genomic Health Literacy](#)

[23.5 Success in Precision Medicine](#)

[23.6 Conclusion](#)

[23.7 Key Points](#)

[Acknowledgments](#)

[Disclaimer](#)

[References](#)

[24 Recruitment, Inclusion, and Diversity in Clinical Trials](#)

[24.1 Background/Context](#)

[24.2 Understanding Barriers to Inclusion in Clinical Research](#)

[24.3 Best Practices for Optimizing Inclusion in Clinical Research](#)

[24.4 Future Directions and Research Needs](#)

[24.5 Conclusion](#)

[24.6 Key Points](#)

[Disclaimer](#)

[References](#)

[25 Sexual and Gender Minority Health](#)

[Disparities Concepts, Methods, and Future Directions](#)

[25.1 Introduction to the Topic, Including Key Definitions](#)

[25.2 How and Why This Topic is Important to Minority Health and Health Disparities Research](#)

[25.3 Most Relevant Measures and Research Methods Used and Recommended](#)

[25.4 Selected Examples of the State of the Science to Illustrate Best Practices](#)

[25.5 Challenges and Future Opportunities](#)

[25.6 Summary](#)

[25.7 Key Points](#)

[Disclaimer](#)

[References](#)

[26 Workforce Diversity and Capacity Building to Address Health Disparities](#)

[26.1 Background](#)

[26.2 Introduction](#)

[26.3 Diversity in the US Scientific and Health Workforce](#)

[26.4 Diversity and Health Disparities: What Are the Links?](#)

[26.5 Methodological Approaches to Understanding Workforce Diversity and Health Disparities](#)

[26.6 Closing Thoughts](#)

[26.7 Key Points](#)

[Acknowledgments](#)

[Disclaimer](#)

[References](#)

[Index](#)

[End User License Agreement](#)

List of Tables

Chapter 2

[Table 2.1 Representative list of biomarkers for allostatic load \[3, 22\].](#)

Chapter 3

[Table 3.1 Rankings of the ten leading causes of death for each racial/ethnic ...](#)

[Table 3.2 Years of potential life lost before age 75 \(per 100 000 population ...](#)

[Table 3.3 Selected list of the most frequently cited acculturation scales.](#)

[Table 3.4 Summary of previously published findings from the Exploring Health ...](#)

Chapter 4

[Table 4.1 Types of disparity measurements and examples from behavioral determ...](#)

Chapter 10

[Table 10.1 Resources for locating self-report measures.](#)

[Table 10.2 Template for reviewing self-report measures for appropriateness in...](#)

Chapter 11

[Table 11.1 Promising partnership practices.](#)

Chapter 12

[Table 12.1 Summary of three main definitions and methods of disparities measu...](#)

[Table 12.2 Examples of Quasi-experimental methods in peer-reviewed literature...](#)

Chapter 13

[Table 13.1 BRFSS model-based prevalence estimates \(percent\) of current cigare...](#)

[Table 13.2 Predicted Standard Errors \(percent\) of BRFSS model-based prevalenc...](#)

Chapter 14

[Table 14.1 Examples of questions that have helped drive big data research in ...](#)

[Table 14.2 Selected examples: applications of big data analytics and artifici...](#)

Chapter 15

[Table 15.1 Description and examples of three types of complex systems models.](#)

[Table 15.2 Description of elements of a successful complex adaptive systems m...](#)

[Table 15.3 Comparisons of three complex systems approaches.](#)

Chapter 16

[Table 16.1 Multilevel Interventions: 2012-2017.](#)

Chapter 18

[Table 18.1 Challenges and approaches in minority health and health disparities...](#)

Chapter 20

[Table 20.1 The seven essential communication skills in the care of vulnerable...](#)

[Table 20.2 Interventions for patients with limited health literacy.](#)

Chapter 21

[Table 21.1 Matrix of comparative effectiveness research study designs and typ...](#)

[Table 21.2 Comparative effectiveness research priority areas and examples of ...](#)

Chapter 22

[Table 22.1 Challenges and opportunities for HIT and health disparities resear...](#)

Chapter 23

[Table 23.1 Examples of PM that have been incorporated into clinical care.](#)

[Table 23.2 Social determinants of health measures that can be collected prosp...](#)

[Table 23.3 Examples of disparate efficacy and safety signals related to antip...](#)

Chapter 24

[Table 24.1 Investigator-identified best practices and recommendations.](#)

[Table 24.2 Minority recruitment online toolkit features and content.](#)

List of Illustrations

Chapter 1

[Figure 1.1 Overlapping but distinct constructs of Minority Health and Health...](#)

[Figure 1.2 Relative risk of all-cause mortality by US annual household incom...](#)

[Figure 1.3 The NIMHD Research Framework.](#)

Chapter 2

[Figure 2.1 Schematic representation of the concept of Allostatic Load: \(a\) G...](#)

[Figure 2.2 Schematic presentation of stress pathway outputs and inputs to th...](#)

[Figure 2.3 Schematic representation of pathways important in hypothalamic co...](#)

[Figure 2.4 Schematic diagram of the influence of glucocorticoids and stress ...](#)

Chapter 3

[Figure 3.1 Conceptual model of race or ethnicity.](#)

[Figure 3.2 Conceptual framework of the distal mediators and moderators of th...](#)

Chapter 4

[Figure 4.1 In this illustration of behavioral determinants for noncommunicab...](#)

[Figure 4.2 Children and adolescents with obesity, overall \(2-19 years of age...](#)

Chapter 6

[Figure 6.1 An illustration of the use of GIS to represent locations \(points\)...](#)

[Figure 6.2 This infographic is an example of how environmental health resear...](#)

Chapter 7

[Figure 7.1 Major migrations and diasporas, 1400-1800, that are the sources o...](#)

[Figure 7.2 The top panel presents genome-wide ancestry of all autosomes for ...](#)

[Figure 7.3 Shown is the process of admixture resulting from a moderate numbe...](#)

[Figure 7.4 A Manhattan plot showing a peak of SNP association on chromosome ...](#)

[Figure 7.5 An admixture scan for focal segmental glomerulosclerosis and HIV-...](#)

Chapter 8

[Figure 8.1 Common diseases characterized by health disparities, with the abs...](#)

Chapter 9

[Figure 9.1 Haplotype diversity in the 1000 Genomes Project. Haplotypes were ...](#)

[Figure 9.2 Individual admixture proportions from New World samples. The six ...](#)

[Figure 9.3 Proportion of individuals with hypertension among those of Africa...](#)

[Figure 9.4 Hypertension prevalence across African and European descent popul...](#)

Chapter 10

[Figure 10.1 Steps for translation of self-report measures.](#)

Chapter 11

[Figure 11.1 CBPR conceptual model.](#)

Chapter 13

[Figure 13.1 BRFSS model-prevalence estimates of current cigarette smoking am...](#)

[Figure 13.2 BRFSS model-prevalence estimates of current cigarette smoking am...](#)

Chapter 14

[Figure 14.1 Big data characteristics.](#)

[Figure 14.2 Goals and opportunities for big data in health disparities: evid...](#)

[Figure 14.3 Spectrum of applications and techniques to analyzing big data. ...](#)

[Figure 14.4 Schematic framework of advanced analytics for health disparity r...](#)

Chapter 15

[Figure 15.1 Relationship between tobacco retailer density and average, total...](#)

Chapter 17

[Figure 17.1 Population health and health disparities research: where we are ...](#)

[Figure 17.2 Project ReD CHiP's conceptual model.](#)

[Figure 17.3 Iceberg concept of culture applied to relationship-centeredness ...](#)

Chapter 18

[Figure 18.1 Distinct VA and CMS data sources needed to construct the VA HBPC...](#)

Chapter 19

[Figure 19.1 Healthcare disparities by race or site of care.](#)

[Figure 19.2 Donabedian model: structure process outcome. Source: Campbell et...](#)

[Figure 19.3 National Quality Forum Roadmap for Promoting Health Equity and E...](#)

[Figure 19.4 Possible impacts of QI on disparities.](#)

[Figure 19.5 Levels of influence of an intervention.](#)

Chapter 20

[Figure 20.1 Framework for communication with vulnerable patients in the outp...](#)

Chapter 22

[Figure 22.1 Electronic health records.](#)

[Figure 22.2 Medical coding systems in EHR.](#)

[Figure 22.3 Types and examples of telehealth.](#)

[Figure 22.4 HIT data types and examples.](#)

Chapter 24

[Figure 24.1 Screenshots of NIMICT.com online toolkits.](#)

[Figure 24.2 Screenshots of EMPaCT consortium online toolkit.](#)

[Figure 24.3 Screenshots of building trust between minorities and researchers...](#)

Chapter 25

[Figure 25.1 Sexual and gender minority population estimates.](#)

[Figure 25.2 Levels of stigma and their relationships.](#)

The Science of Health Disparities Research

Edited by

Irene Dankwa-Mullan

*IBM Watson Health
IBM Corporation
Bethesda, MD, USA*

Eliseo J. Pérez-Stable

*National Institute on Minority Health and Health
Disparities
National Institutes of Health
Bethesda, MD, USA*

Kevin L. Gardner

*Department of Pathology and Cell Biology
Columbia University Medical Center
New York, NY, USA.*

Xinzhi Zhang

*Division of Clinical Innovation, National Center for
Advancing
Translational Science
National Institutes of Health
Bethesda, MD, USA*

Adelaida M. Rosario

*Commissioned Corps Headquarters
Office of the Surgeon General
Rockville, MD, USA*

WILEY Blackwell

This edition first published 2021
© 2021 John Wiley & Sons, Inc.

All rights reserved. No part of this publication may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, except as permitted by law. Advice on how to obtain permission to reuse material from this title is available at <http://www.wiley.com/go/permissions>.

The right of Irene Dankwa-Mullan, Eliseo J. Pérez-Stable, Kevin L. Gardner, Xinzhi Zhang, Adelaida M. Rosario to be identified as the author(s) of the editorial material in this work has been asserted in accordance with law.

Registered Office

John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030, USA

Editorial Office

9600 Garsington Road, Oxford, OX4 2DQ, UK

For details of our global editorial offices, customer services, and more information about Wiley products visit us at www.wiley.com.

Wiley also publishes its books in a variety of electronic formats and by print-on-demand. Some content that appears in standard print versions of this book may not be available in other formats.

Limit of Liability/Disclaimer of Warranty

While the publisher and authors have used their best efforts in preparing this work, they make no representations or warranties with respect to the accuracy or completeness of the contents of this work and specifically disclaim all warranties, including without limitation any implied warranties of merchantability or fitness for a particular purpose. No warranty may be created or extended by sales representatives, written sales materials or promotional statements for this work. The fact that an organization, website, or product is referred to in this work as a citation and/or potential source of further information does not mean that the publisher and authors endorse the information or services the organization, website, or product may provide or recommendations it may make. This work is sold with the understanding that the publisher is not engaged in rendering professional services. The advice and strategies contained herein may not be suitable for your situation. You should consult with a specialist where appropriate. Further, readers should be aware that websites listed in this work may have changed or disappeared between when this work was written and when it is read. Neither the publisher nor authors shall be liable for any loss of profit or any other commercial damages, including but not limited to special, incidental, consequential, or other damages.

Library of Congress Cataloging-in-Publication Data

Names: Dankwa-Mullan, Irene, editor. | Pérez-Stable, Eliseo J., editor. | Gardner, Kevin L., M.D., editor. | Zhang, Xinzhi, 1971- editor. | Rosario, Adelaida M., 1977- editor.

Title: The science of health disparities research / edited by Irene Dankwa-Mullan, Eliseo J. Pérez-Stable, Kevin L. Gardner, Xinzhi Zhang, Adelaida M. Rosario.

Description: Hoboken, NJ : Wiley-Blackwell, 2021. | Includes bibliographical references and index.

Identifiers: LCCN 2020024358 (print) | LCCN 2020024359 (ebook) | ISBN 9781119374817 (cloth) | ISBN 9781119374831 (adobe pdf) | ISBN 9781119374848 (epub)

Subjects: MESH: Healthcare Disparities | Translational Medical Research | Socioeconomic Factors | Social Determinants of Health | Minority Health

Classification: LCC RA563.M56 (print) | LCC RA563.M56 (ebook) | NLM W 76.1 | DDC 362.1089-dc23

LC record available at <https://lcn.loc.gov/2020024358>

LC ebook record available at <https://lcn.loc.gov/2020024359>

Cover Design: Wiley

Cover image: Barbershop Photo Courtesy of Stephen B. Thomas, Hula Dance Photo Courtesy of Joseph Kaholokula, Happy Baby Girl Playing With Toys In Playroom © Monkey Business Images/Shutterstock

List of Contributors

Adebowale Adeyemo

Center for Research on Genomics and Global Health,
National Human Genome Research Institute,
National Institutes of Health
Bethesda, MD
USA

Margarita Alegria

Department of Medicine, Disparities of Research Unit
Massachusetts General Hospital
Boston, MA
USA;
Departments of Medicine and Psychiatry
Harvard Medical School
Boston, MA
USA

Naomi Ali

Department of Medicine, Disparities of Research Unit
Massachusetts General Hospital
Boston, MA
USA

Jeroan Allison

University of Massachusetts Medical School
Worcester, MA
USA

Jennifer Alvidrez

National Institute on Minority Health and Health
Disparities
National Institutes of Health
Bethesda, MD
USA

Hortensia Amaro

Herbert Wertheim, College of Medicine
Florida International University
Miami, FL
USA;

Robert Stempel, College of Public Health and Social Work
Florida International University
Miami, FL
USA

Noa Appleton

Department of Population Health
New York University School of Medicine
New York, NY
USA

Inna Arnaudova

Department of Psychiatry
University of California
Los Angeles, CA
USA

Ligia Artiles

National Institute on Minority Health and Health
Disparities
National Institutes of Health
Bethesda, MD
USA

Leslie J. Baier

Phoenix Epidemiology and Clinical Research Branch,
National Institute of Diabetes and Digestive and Kidney
Diseases
National Institutes of Health
Phoenix, AZ
USA

Tracy Bastain

Department of Preventive Medicine, Keck School of
Medicine
University of Southern California
Los Angeles, CA
USA

Sara E. Baumann

Department of Behavioral and Community Health Sciences
University of Pittsburgh Graduate School of Public Health
Pittsburgh, PA
USA

Amy R. Bentley

Center for Research on Genomics and Global Health,
National Human Genome Research Institute
National Institutes of Health
Bethesda, MD
USA

Rick A. Berzon

National Institute on Minority Health and Health
Disparities
National Institutes of Health
Bethesda, MD
USA

Bernadette Boden-Albala

Department of Population Health and Disease Prevention
University of California
Irvine, CA
USA;
Department of Epidemiology
University of California
Irvine, CA
USA

Nancy Breen

National Institute on Minority Health and Health
Disparities
National Institutes of Health
Bethesda, MD
USA

Carrie Breton

Department of Preventive Medicine, Keck School of
Medicine
University of Southern California
Los Angeles, CA
USA

Esteban Burchard

Department of Bioengineering and Therapeutic Sciences
University of California
San Francisco, CA
USA

Jung S. Byun

National Institute on Minority Health and Health
Disparities
National Institutes of Health
Bethesda, MD
USA

Tamela Cannady

Choctaw Nation Health Service
Talihina, OK
USA

Olveen Carrasquillo

Division of General Internal Medicine, Department of
Medicine, Miller School of Medicine
University of Miami
Miami, FL
USA