

Winter 2024, PPHA 37910 Race and Ethnic Differences in Health: Epidemiology, Behavior and Policy

Class Meeting Time: Tuesday and Thursday 11:00 a.m. – 12:20 p.m.

Instructor: Robert Kaestner **Office:** Keller 3057

E-mail: <u>kaestner@uchicago.edu</u> **Office Hours**: Email anytime; TH. 1:00 -2:00 pm; and by appt.

Teaching Assistants:

TBN Office: TBD Office Hours: TBD

Course Description

The course will focus on health disparities between three racial/ethnic groups in the USA: non-Hispanic Black people, non-Hispanic white people and Hispanic people. These categories are imperfect and imprecise, and obscure important variation within each group, but are widely used by government statisticians, academic researchers and policymakers (see: https://www.govinfo.gov/content/pkg/FR-1997-10-30/pdf/97-28653.pdf. and https://www.census.gov/library/stories/2021/08/improved-race-ethnicity-measures-reveal-united-states-population-much-more-multiracial.html). For that reason, they are useful.

The course will begin with a review of the human capital model of demand for health and healthcare over the life course. This disciplinary focus is intended to provide a framework (among other disciplinary frameworks) that can be used to identify potential causes and solutions to racial and ethnic health disparities. The conceptual model will also aide in the formulation and evaluation of empirical research, and public policy concerned with racial and ethnic disparities in health. Conceptual models used by sociologists will also be reviewed and integrated into the human capital model.

The course will review the extent and magnitude of health disparities by race and ethnicity, and how those disparities evolve over the life course from birth to old age. At each age, racial and ethnic disparities in illnesses that account for a large share of poor health will be identified. The time series pattern of racial and ethnic health disparities at each age will also be reviewed. The course will review and assess research intended to explain (identify causes of) racial and ethnic disparities at each age. Some of the primary explanations include access and use of medical care, socioeconomic status (income and education) and discrimination/racism—both as experienced by individuals and as manifested systemically, for example, by healthcare providers. Some major government interventions to reduce racial and ethnic disparities in health at each age will be reviewed and assessed in terms of efficacy.

The literature on racial and ethnic disparities in health is huge and a one-quarter course cannot reasonably cover everything. The course is intended to serve as an introduction to the topic and provide a conceptual and empirical foundation for further study. The course highlights the nature and extent of racial/ethnic disparities in health, how to place these disparities in a conceptual context, and it reviews representative descriptive and causal studies of possible explanations of racial/ethnic health disparities.

Course Objectives

The course is intended to provide the following learning objectives:

- 1. An understanding of the human capital model of the demand for health and health care and how that model can be used to formulate and evaluate research and policy intended to explain racial and ethnic disparities in health.
- 2. An understanding of some sociological models of health disparities and how those models relate to the economic model.
- 3. A familiarity with the magnitudes of racial and ethnic disparities in health including the leading illnesses that account for much of the health disparities.
- 4. Knowledge of the Hispanic or immigrant paradox and possible explanations of it
- 5. Knowledge of important empirical issues related to measuring and interpreting associations between race and health, particularly with respect to socioeconomic status
- 6. A basic understanding of the range of empirical evidence related to the major hypothesized explanations of and solutions to racial and ethnic disparities in health
- 7. The ability to combine theory and empirical methods to critically evaluate research and policy about the causes and solutions to racial and ethnic disparities in health.

Relationship to Curriculum

This course builds on the foundation of microeconomics provided in the core economics sequence. In this course, we will focus on consumer theory as it relates to choices about health and healthcare, and the unique aspects of those choices, for example, how biological and clinical factors and the uncertainty of illness affect those choices. The course also contributes to a better understanding of diversity and how racial and ethnic diversity interacts with society and the health care system to affect health. The course will build on the core methods courses in statistics and program evaluation through an assessment of empirical research related to explanations of racial and ethnic disparities in health.

Course Format

In-person meetings during scheduled class time—Tuesday and Thursday Wednesday 11 am 12:20 pm.

Course Policies:

Academic Integrity: (https://studentmanual.uchicago.edu/Policies)

It is worth explicitly stating the University's approach here: "It is contrary to justice, to academic integrity, and to the spirit of intellectual inquiry to submit the statements or ideas of work of others as one's own. To do so is plagiarism or cheating, offenses punishable under the University's disciplinary system. Because these offenses undercut the distinctive moral and intellectual character of the University, we take them very seriously and punishments for them may include expulsion from the University."

"Proper acknowledgment of another's ideas, whether by direct quotation or paraphrase, is expected. In particular, if any written or electronic source is consulted and material is used from that source, directly or indirectly, the source should be identified by author, title, and page number. Any doubts about what constitutes "use" should be addressed to the instructor."

Use of Web and Email:

I will post course materials to the university's CANVAS web-based course management system: the URL is http://courses.uchicago.edu/. Students are responsible for any and all material posted there. I encourage the use of email and I try to respond in a timely fashion. My email address is kaestner@uchicago.edu. Please be sure to set your notifications on CANVAS so that you receive all communications from me sent through this platform.

Class Attendance and Participation:

I understand that circumstances may sometimes require you to miss a class, although with a 9-week quarter, any absence represents a significant loss of time. Students who need to miss class because of work, sickness, or other reasons, shall notify me in a timely manner as to when they will be absent. I will make every reasonable effort to honor the request, not penalize the student for missing the class, and if an examination or project is due during the absence, give the student an exam or assignment equivalent to the one completed by those students in attendance. A similar process for notifying me should be followed for students who wish to observe their religious holidays. Again, I will make every reasonable effort to honor the request and not penalize the student for missing the class.

Class participation: The class participation assignments (to be added) are intended to encourage student engagement, and to allow students to articulate course content in their own words, deepen their understanding of the course content and to provide an opportunity for students to learn from one another. Everyone is expected to participate and everyone should feel comfortable expressing their view. I understand that it may be difficult for some students to speak publicly, but the class is a welcoming, respectful community. The class discussions are an active learning process and by definition learning means not knowing already. So, feel free to think creatively and openly even though sometimes it will be a miss hit.

COVID-19 Protocols should be followed: https://goforward.uchicago.edu/health-requirements/

Disability Accommodation (https://disabilities.uchicago.edu/):

The University of Chicago seeks to provide an environment conducive to learning, teaching, working, and conducting research that values the diversity of its community. The University strives to be supportive of the academic, personal, and work-related needs of each individual and is committed to facilitating the full participation of students with a disability in the life of the University. Students with a disability, particularly those that require an accommodation, should contact Student Disability Services (https://disabilities.uchicago.edu/).

Harris students are not required to submit their accommodations letter to the instructor. Students from other divisions in the University must submit their accommodations letter to either the instructor or the Harris Dean of Students Office. Students who do not yet have formal accommodations in place but who feel they need accommodations on a temporary or ongoing basis should contact the Harris Dean of Students Office or Student Disability Services.

Course Requirements

Books:

• Textbook: LaVeist, T. A., & Isaac, L. A. (Eds.). (2013). *Race, ethnicity, and health: A public health reader* (2nd ed.). Jossey-Bass/Wiley.

The textbook is a reader with many articles that summarize issues and evidence. It is a handy reference tool.

Assignments and Grades:

- Late Assignments: Unless explicitly agreed upon in advance, late assignments will not be accepted.
- All assignments are to be completed independently without assistance except from TAs or Professor.
- There will be weekly class assignments that will be short (one-page) and intended to stimulate engagement with course material and class discussion
- There will be three longer (e.g., 4 pages) take-home assignments that will require integrating course material into analyses of the likely effectiveness of public policies targeted at reducing racial disparities in health
- Assignments (weekly and take-home assignments) are graded using the following scale:
 4=excellent (professional preparation, answered specific questions directly and germanely, provided interesting analysis/insight)
 - 3=good (professional preparation, answered specific questions directly and in most cases germanely)
 - 2=average (professional preparation, answered specific questions directly but with some error)
 - 1=unacceptable (unprofessional preparation, incomplete answers to specific questions, mostly incorrect answers).

Final grades are letter grades and follow the common grading policy of University and Harris Public Policy: https://registrar.uchicago.edu/records/grading/.

A note on quantity of reading. Students will not have to read all the articles listed in the syllabus. The syllabus is intended to provide a representative set of studies that can be used as a starting point for further inquiry into a specific aspect of racial and ethnic disparities in health. Students will be assigned to one or two readings each week and weekly assignments and class participation will be based on those readings.

Detailed Course Outline

Week 1 January 4, 6

Racial/Ethnic Disparities in Health through the Lens of the Economic Model of Health

Objectives:

- 1. Present the intuition and structure of the human capital model of the demand for health
- 2. Describe the health production function and discuss the link between the health production function and proximate causes of health
- 3. Present the economic model of the demand for health and how that model embeds the health production function
- 4. Illustrate how to use the health production function and economic model of health to identify potential causes of racial and ethnic disparities in health

Takeaways:

- 1. Health is a physical outcome determined by biological factors, clinical and medical technology, and behavioral choices
- 2. Health is produced over the lifecycle through a process of investment (e.g., preventive medical care), which improves health, and depreciation (i.e., illness), which diminishes health
- 3. Health at any age depends on a person's biological endowment, all prior investments in health, and the depreciation of health
- 4. Racial and ethnic disparities in health are a result of differences in the biological factors, use of clinical and medical technologies, and behavioral choices
- Solutions to racial and ethnic disparities in health are to be found in the causes of differences in biological factors, the use of clinical and medical technologies, and behavioral choices
- Racism is one explanation of differences in biological factors, the use of clinical and medical technologies, and behavioral choices that cause racial and ethnic disparities in health

Topics:

- 1. Human capital production function—evolution of health over the lifecycle
- 2. Demand for investments in health
- 3. Racial and ethnic differences in health though the lens of economic model of health

- 1. (Presented by Professor, student does not have to read) Grossman, Michael. 2000. "The Human Capital Model," in eds., Anthony Culyer and Joseph Newhouse <u>Handbook of</u> Health Economics. North-Holland, Elsevier Science, Chapter 7:347-405.
- 2. (Presented by Professor, student does not have to read) Grossman, Michael. 2000. "The Human Capital Model," in eds., Anthony Culyer and Joseph Newhouse <u>Handbook of</u> Health Economics. North-Holland, Elsevier Science, Chapter 7:347-405.
- 3. (Presented by Professor, student does not have to read)
- 4. Becker, Gary. 2007. Health as Human Capital: Synthesis and Extensions Oxford Economic Papers, 59(3):379-410

Week 2, January 9

Sociological Perspectives: Cumulative Advantage, Fundamental Causes and Weathering

Objectives:

- 1. Review important sociological perspectives of the determinants of health
- 2. Link the sociological perspective to the economic model
- 3. Present evidence related to the weathering hypothesis

Takeaways:

- Sociological perspectives of the determinants of health are consistent with the economic model
- 2. Cumulative advantage, for example, reflects the fact that health is determined over the lifecycle and that resource (e.g., money) differences will tend to make disparities in health by income (wealth, other resources) grow with age
- 3. Fundamental causes of health, such as income and racism, are what may be referred to as causes of causes because they are the causes of differences in biological factors, the use of clinical and medical technologies, and behavioral choices that determine health
- 4. Weathering is a description of differential depreciation by race and ethnicity—here too racism is a cause of the differential rates of illness (ageing)
- 5. In sum, the sociological and economic models share causal pathways that link race and ethnicity to health through the mediating influence of distal (e.g., income) and proximate (e.g., use of medical care) causes of health

Topics:

- 1. Cumulative advantage/disadvantage
- 2. Fundamental causes of health
- 3. Weathering

- 1. Chapter 17, LaViest et al.
- 2. Dannefer D. Systemic and Reflexive: Foundations of Cumulative Dis/Advantage and Life-Course Processes. J Gerontol B Psychol Sci Soc Sci. 2020 Jun 2;75(6):1249-1263.
- 3. Phelan, J. C., Link, B. G., & Tehranifar, P. (2010). Social Conditions as Fundamental Causes of Health Inequalities Theory, Evidence, and Policy Implications. Journal of Health and Social Behavior, 51(1 suppl), S28-S40.
- 4. Geronimus, A. T., Hicken, M., Keene, D., & Bound, J. (2006). "Weathering" and age patterns of allostatic load scores among blacks and whites in the United States. *American journal of public health*, 96(5), 826–833.

Week 2, January 11

Conceptual and Empirical Pathways—Race/Ethnicity: Cause or Proxy for Causes?

Objectives:

- 1. Describe the commonly used empirical approach to obtain associations between race and health adjusting for mediating factors, such as education
- 2. Review typical empirical evidence of the association between race and health
- 3. Discuss the debate over the interpretation of associations between race and health derived from these analyses
- 4. Present a framework to understand the causal pathways from race to racism to distal (e.g., education) and proximate (e.g., medical care) causes of health to health and how that framework aides interpretation of associations between race and health

Takeaways:

- 1. Race is an attribute that is not subject to manipulation in the sense that it is not possible to conduct an experiment where race is randomly assigned
- 2. While audit studies manipulate race, for example, by changing racial categories on resumes or in a "secret shopper" setting, these experiments have limited external validity and are based on a small slice of a racialized life
- 3. Some statisticians argue that because race cannot be manipulable that it cannot be a cause
- 4. This statistical view defines causes with reference to a research design, which is not consistent with defining causes from a conceptual/theoretical model
- 5. Arguably it is best to view racism as a cause and race as a proxy, or marker, for exposure to racism
- 6. Measurement issues related to factors that may confound or mediate associations between race and health, such as education and income, are important and cannot be ignored, although often this is the fact the case in empirical research

Topics:

- 1. Race and socioeconomic status—interpreting empirical evidence
- 2. Can race be a cause?
- 3. Mediators of casual effect of racism on health

- Jay S. Kaufman, Richard S. Cooper, Commentary: Considerations for Use of Racial/Ethnic Classification in Etiologic Research, *American Journal of Epidemiology*, Volume 154, Issue 4, 15 August 2001, Pages 291–298, https://doi.org/10.1093/aje/154.4.291
- 2. VanderWeele, T. J., & Robinson, W. R. (2014). On the causal interpretation of race in regressions adjusting for confounding and mediating variables. *Epidemiology (Cambridge, Mass.)*, 25(4), 473–484.
- 3. Nuru-Jeter AM, Michaels EK, Thomas MD, Reeves AN, Thorpe RJ Jr, LaVeist TA. Relative Roles of Race Versus Socioeconomic Position in Studies of Health Inequalities: A Matter of Interpretation. Annu Rev Public Health. 2018 Apr 1;39:169-188. doi: 10.1146/annurev-publhealth-040617-014230. Epub 2018 Jan

Week 3-4, January 16,18, 23

Extent of, Causes of, and Solutions to, Racial Disparities in Infant Health

Objective:

- 1. Present descriptive evidence of racial disparities in several measures of infant health
- 2. Present descriptive evidence of racial disparities in pregnancy-related health care
- 3. Assess the scope for racial disparities in pregnancy-related health care to mediate racial disparities in infant health
- 4. Review causal evidence of the effect of the quantity and quality of pregnancy-related health care on infant health
- 5. Assess whether disparities in in pregnancy-related health care are the cause of racial disparities in infant health?
- 6. Present descriptive evidence of racial disparities in maternal/family socioeconomic status
- Assess the scope for racial disparities in socioeconomic status to mediate racial disparities in infant health
- 8. Review causal evidence of the effect of socioeconomic status on infant health
- 9. Assess whether disparities in socioeconomic status are the cause of racial disparities in infant health?
- 10. Identify and evaluate major public policies focused on child health and racial disparities in child health

Takeaways:

- 1. There are significant racial disparities in infant health, for example, low birth weight, and these disparities have persisted for decades
- 2. Racial disparities in the quantity of medical care, for example, prenatal care exist, but are relatively small vis-à-vis racial disparities in infant health
- 3. Similarly, racial disparities in access to health insurance, which facilitates and increases use of health care services, exist but have been decreasing in recent periods
- 4. Causal evidence that prenatal care significantly affects infant health is relatively sparse and unlikely to be able to explain racial disparities in infant health
- 5. An interesting, but under studied cause of racial disparities in infant health is racial bias in provider treatment
- 6. Some evidence suggests that racial concordance between provider and patient race significantly affects infant health
- 7. Evidence on the causal effect of health insurance on infant health is sparse
- 8. While intuition suggests that health insurance coverage and prenatal care and other medical interventions would be important, high-quality evidence is not compelling that this is in fact the case
- 9. Racial disparities in socioeconomic status (education, income) are large and persistent
- 10. Evidence that maternal education and income significantly affects infant health is available, although estimates suggest small effects
- 11. Disparities in socioeconomic status may be a potential explanation (cause) of racial disparities in infant health, but this explanation cannot account for the entire disparity
- 12. Underlying all disparities in proximate causes of infant health, such as disparities in prenatal care, and distal causes such as income and education, is the issue of racism as a cause of these causes
- 13. Racism may be a fundamental cause of racial disparities in infant health, but identifying this causal pathway is difficult and evidence to confirm it is incomplete
- 14. Evidence that common approaches to addressing racial disparities in infant health, such as expanding health insurance coverage and enhancing prenatal care treatment, suggest that these policies have relatively little effect

Topics:

- 1. Descriptive evidence of racial disparities in infant health
- 2. Descriptive evidence of racial disparities in pregnancy-related health care
- 3. Causal evidence of the effect of the quantity and quality of pregnancy-related health care on infant health

- 4. Descriptive evidence of racial disparities in socioeconomic status
- 5. Causal evidence of the effect of socioeconomic status on infant health
- 6. Descriptive evidence of racial disparities in maternal health behaviors
- 7. Causal evidence of the effect of health behaviors on infant health
- 8. What "causes" explain racial differences in child health?
- 9. What policies would effectively address racial disparities in child health?

- 1. Samuel H. Fishman, Robert A. Hummer, Gracia Sierra, Taylor Hargrove, Daniel A. Powers & Richard G. Rogers (2021) Race/ethnicity, maternal educational attainment, and infant mortality in the United States, Biodemography and Social Biology, 66:1, 1-26
- Grobman WA, Parker CB, Willinger M, Wing DA, Silver RM, Wapner RJ, Simhan HN, Parry S, Mercer BM, Haas DM, Peaceman AM, Hunter S, Wadhwa P, Elovitz MA, Foroud T, Saade G, Reddy UM; Eunice Kennedy Shriver National Institute of Child Health and Human Development Nulliparous Pregnancy Outcomes Study: Monitoring Mothers-to-Be (nuMoM2b) Network*. Racial Disparities in Adverse Pregnancy Outcomes and Psychosocial Stress. Obstet Gynecol. 2018 Feb;131(2):328-335.
- 3. Rosenberg, Lynn, Julie R. Palmer, Lauren A. Wise, Nicholas J. Horton, and Michael J. Corwin. "Perceptions of racial discrimination and the risk of preterm birth." *Epidemiology* (2002): 646-652.
- 4. Stress: Anna Aizer & Laura Stroud & Stephen Buka, 2016. "Maternal Stress and Child Outcomes: Evidence from Siblings," Journal of Human Resources, 51(3), pages 523-555
- 5. Education: McCrary, J., & Royer, H. (2011). The effect of female education on fertility and infant health: evidence from school entry policies using exact date of birth. *American economic review*, 101(1), 158-95.
- 6. Endowment: Currie, J., & Moretti, E. (2007). Biology as destiny? Short-and long-run determinants of intergenerational transmission of birth weight. *Journal of Labor economics*, 25(2), 231-264.
- 7. Income: Hilary Hoynes & Doug Miller & David Simon, 2015. "Income, the Earned Income Tax Credit, and Infant Health." American Economic Journal: Economic Policy, American Economic Association, vol. 7(1), pages 172-211 (if interested, see Dench D, Joyce T. The earned income tax credit and infant health revisited. Health Econ. 2020 Jan;29(1):72-84. doi: 10.1002/hec.3972. Epub 2019 Nov 23. PMID: 31758742.)
- 8. Lyu, Wei, Wehby, George, and Robert Kaestner. (in progress). Effects of Income on Infant Health: Evidence from the Expanded Child Tax Credit and Pandemic Stimulus Checks.
- 9. Greenwood, Brad N., Rachel R. Hardeman, Laura Huang, and Aaron Sojourner. "Physician—patient racial concordance and disparities in birthing mortality for newborns." *Proceedings of the National Academy of Sciences* 117, no. 35 (2020): 21194-21200.

Week 4, January 25

Prenatal Environment and the Developmental Origins of Disease

Objectives:

- 1. Present an outline of the "Barker" hypothesis of the developmental origins of disease
- 2. Integrate the "Barker" hypothesis into the human capital model of the demand for health
- 3. Review evidence of the "Barker" hypothesis

Takeaways:

- 1. The "Barker" hypothesis and other biological mechanisms suggest that the prenatal environment influences health over the entire lifecycle by affecting biological and epigenetic mechanisms that affect health
- 2. Racial and ethnic disparities in health may begin prior to conception and during prenatal period
- 3. Racial disparities in the prenatal environment, for example, maternal stress, may have lasting and lifetime effects on health
- 4. If true, policies targeting the prenatal environment may be particularly effective because of the long reach of the early developmental environment on health
- 5. Evidence to support the "Barker" hypothesis is not uniform and it is fair to characterize it as a potential explanation that needs a additional evidence

Topics:

- 1. "Barker" hypothesis and the developmental origins of disease
- 2. Evidence of the "Barker" hypothesis
- 3. Review of representative studies of the "Barker" hypothesis

- 1. Chapter 10 LaViest et al.
- 2. Almond, Douglas, and Janet Currie. 2011. "Killing Me Softly: The Fetal Origins Hypothesis." *Journal of Economic Perspectives*, 25 (3): 153-72.
- 3. Barker, D. J., & Thornburg, K. L. (2013). The obstetric origins of health for a lifetime. Clinical Obstetrics and Gynecology, 56, 511–519
- 4. Lumey, L. H., Stein, A. D., & Susser, E. (2011). Prenatal famine and adult health. *Annual review of public health*, *32*, 237–262.
- 5. Douglas Almond. "Is the 1918 Influenza Pandemic Over? Long-Term Effects of *In Utero* Influenza Exposure in the Post-1940 U.S. Population. Journal of Political Economy 2006 114:4, 672-712.
- 6. Tobi, Elmar W., Roderick C. Slieker, René Luijk, Koen F. Dekkers, Aryeh D. Stein, Kate M. Xu, Biobank-based Integrative Omics Studies Consortium et al. "DNA methylation as a mediator of the association between prenatal adversity and risk factors for metabolic disease in adulthood." *Science advances* 4, no. 1 (2018): eaao4364.

Week 5 January 30, February 1

Extent of, Causes of, and Solutions to, Racial Disparities in Child Health

Objective:

- 1. Present descriptive evidence of the nature and extent of racial disparities in child health
- 2. Discuss the causal pathways, as elucidated in the economic model of health, linking race to child health
- 3. Review evidence on the causes of child health (e.g., maternal education, income, neighborhood)
- 4. Assess and summarize evidence on the causal explanations of racial disparities in child health
- 5. Identify and evaluate the effectiveness of major public policies focused on child health and racial disparities in child health

Takeaways:

- 1. There are significant racial disparities in child health that have been persistent
- 2. Racial disparities in traffic accidents and homicides are a notable and account for a large share of overall racial disparities in child health
- 3. Racial disparities in access to health insurance, which facilitates and increases use of health care services, exist but have been decreasing in recent periods
- 4. Evidence on the causal effect of health insurance on child health is sparse
- 5. Causal evidence that maternal education and income significantly affects child health is available, although estimates suggest small effects
- 6. Evidence of the causal effect of neighborhood on child health suggest that neighborhoods may matter, but compelling causal evidence is limited
- 7. Evidence suggests that common approaches to addressing racial disparities in child health, such as expanding health insurance coverage, have had relatively little effect
- 8. The extent to which racism faced by parents that affects socioeconomic status, parental health, parental health behaviors, and other parental activities that affect child health is an important research question in need of more research

Topics:

- 1. Descriptive evidence of racial disparities in child health
- 2. Descriptive evidence of racial disparities in potential causes of child health: socioeconomic status, use of medical care, parental health
- 3. Evidence of the causal effect of potential explanations (e.g., socioeconomic status) of child health
- 4. What "causes" explain racial differences in child health?
- 5. What policies would effectively address racial disparities in child health?

- 1. Neil K. Mehta, Hedwig Lee, Kelly R. Ylitalo. (2013) Child health in the United States: Recent trends in racial/ethnic disparities. Social Science & Medicine 95, 6-15.
- 2. Rogers, R. G., Lawrence, E. M., Hummer, R. A., & Tilstra, A. M. (2017). Racial/Ethnic Differences in Early-Life Mortality in the United States. Biodemography and social biology, 63(3), 189–205.
- 3. Costello, E.J.; Erkanli, A.; Copeland, W.; Angold, A. Association of Family Income Supplements in Adolescence With Development of Psychiatric and Substance Use Disorders in Adulthood Among an American Indian Population. J. Am. Med. Assoc. 2010, 303, 1954–1960.
- 4. Akee, R.K.Q.; Copeland, W.E.; Keeler, G.; Angold, A.; Costello, E.J. Parents' Incomes and Children's Outcomes: A Quasi-experiment Using Transfer Payments from Casino Profits. Am. Econ. J. Appl. Econ. 2010, 2, 86–115.
- 5. Krieger, J.W.; Takaro, T.K.; Song, L.; Weaver, M. The Seattle-King County Healthy Homes Project: A randomized, controlled trial of a community health worker intervention to decrease exposure to indoor asthma triggers. Am. J. Public Health 2005, 95, 652–659. [

- 6. Income: Cesarini, D., Lindqvist, E., Östling, R., & Wallace, B. (2016). Wealth, health, and child development: Evidence from administrative data on Swedish lottery players. *The Quarterly Journal of Economics*, *131*(2), 687–738.
- 7. Income: Milligan, K., & Stabile, M. (2011). Do child tax benefits affect the well-being of children? Evidence from Canadian child benefit expansions. *American Economic Journal: Economic Policy*, *3*, 175–205.
- 8. Education: Jacob Nielsen Arendt, Mads Lybech Christensen, Anders Hjorth-Trolle, Maternal education and child health: Causal evidence from Denmark, Journal of Health Economics, Volume 80, 2021, 102552
- 9. Education: Lindeboom, M., Llena-Nozal, A., & van Der Klaauw, B. 2009. Parental education and child health: Evidence from a schooling reform. *Journal of Health Economics*, 28(1), 109-131.
- Neighborhood: Kessler, R.C., Duncan, G.J., Gennetian, L.A., Katz, L.F., Kling, J.R., Sampson, N.A., Sanbonmatsu, L., Zaslavsky, A., Ludwig, J. (2014). "Associations of Housing Mobility Interventions for children in High-Poverty Neighborhoods with Subsequent Mental Disorders During Adolescence." <u>JAMA</u>. 311(9): 937-947

Week 6: February 6, 8

Extent of, Causes of, and Solutions to, Racial Disparities in Adult Health

Objective:

- 1. Present descriptive evidence of racial disparities in adult health
- 2. Review the classic article by W.E.B. Dubois on health of Black population of Philadelphia at the turn of the 20th century
- 3. Present descriptive evidence of racial disparities in health insurance and use of medical care
- 4. Assess the scope for racial disparities in health insurance and medical care to mediate racial disparities in adult health
- 5. Assess whether disparities in health insurance and access and use of health care are the cause of racial disparities in adult health?
- 6. Present descriptive evidence of racial disparities in socioeconomic status
- 7. Assess the scope for racial disparities in socioeconomic status to mediate racial disparities in adult health
- 8. Review causal evidence of the effect of socioeconomic status on adult health
- 9. Assess whether disparities in socioeconomic status are the cause of racial disparities in adult health?
- 10. Identify and evaluate major public policies focused on health and racial disparities in adult health

Takeaways:

- 1. There are significant racial disparities in adult health and these disparities have persisted for decades
- 1. Racial disparities in health insurance and the quantity of medical care exist, but are relatively small vis-à-vis racial disparities in adult health
- 2. Evidence on the causal effect of health insurance on adult health is sparse and does not consistently indicate a beneficial effect
- 3. While intuition suggests that health insurance coverage and medical care and other medical interventions would be important, high-quality evidence is not compelling that this is in fact the case
- 4. Racial disparities in socioeconomic status (education, income) are large and persistent
- 5. Evidence that education and income significantly affects adult health is available, although estimates suggest small effects and is not uniform
- 6. Disparities in socioeconomic status may be a potential explanation (cause) of racial disparities in adult health, but it is not a major explanation
- 7. Underlying all disparities in distal and proximate causes of infant health is the issue of racism as a cause of these causes
- 8. Racism may be a fundamental cause of racial disparities in adult health, but identifying this causal pathway is difficult and evidence to confirm it incomplete
- 9. Evidence suggests that common approaches to addressing racial disparities in adult health, such as expanding health insurance coverage and enhancing access to preventive care, have relatively little effect

Topics:

- 1. Descriptive evidence of racial disparities in adult health
- 2. Descriptive evidence of racial disparities in potential causes of adult health
- 3. Evidence of the causal effect of potential explanations (e.g., socioeconomic status) of adult health
- 4. What "causes" explain racial differences in adult health?
- 5. What policies would effectively address racial disparities in adult health?

- 1. Chapters 16 and 18 LaViest et al.
- 2. (Read pp. 147-163, and other sections if interested) W.E.B. DuBois. 1906. The Health and Physique of the Negro American: Report of a Social Study Made Under the Direction of Atlanta University, Together with the Proceedings of the Eleventh

- Conference for the Study of the Negro Problems, Held at Atlanta University, May the 29th, Atlanta University Press
- 3. Smith, J. P., & Kington, R. (1997). *Race, socioeconomic status, and health in late life* (pp. 106-62). RAND.
- Fuller-Rowell, Thomas E. PhD; Curtis, David S. MS; Doan, Stacey N. PhD; Coe, Christopher L. PhD. Racial Disparities in the Health Benefits of Educational Attainment, Psychosomatic Medicine: January 2015 - Volume 77 - Issue 1 - p 33-40
- 5. Grubbs, S.S.; Polite, B.N.; Carney, J.J.; Bowser, W.; Rogers, J.; Katurakes, N.; Hess, P.; Paskett, E.D. Eliminating racial disparities in colorectal cancer in the real world: It took a village. J. Clin. Oncol. 2013, 31, 1928–1930.
- David Cesarini, Erik Lindqvist, Robert Östling, Björn Wallace, Wealth, Health, and Child Development: Evidence from Administrative Data on Swedish Lottery Players, *The Quarterly Journal of Economics*, Volume 131, Issue 2, May 2016, Pages 687–738
- 7. Schwandt, H. Wealth Shocks and Health Outcomes: Evidence from Stock Market Fluctuations. American Economic Journal: Applied Economics, 10:349–377, 2018
- Katherine Baicker, Ph.D., et al (Oregon Health Study Group). 2013. "The Oregon Experiment — Effects of Medicaid on Clinical Outcomes." N Engl J Med 368:1713-1722.
- 9. Neil M Davies, Matt Dickson, George Davey Smith, Gerard van den Berg, Frank Windmeijer. 2017. "The Causal Effects of Education on Health, Mortality, Cognition, Well-being, and Income in the UK Biobank." *Nature: Human Behavior*.
- 10. David Frisvold, Ezra Golberstein, School quality and the education—health relationship: Evidence from Blacks in segregated schools, Journal of Health Economics, 30:1232-1245
- 11. <u>L</u>udwig, J., Sanbonmatsu, L., Gennetian, L., Adam, E., Duncan, G. J., Katz, L. F., & McDade, T. W. (2011). Neighborhoods, obesity, and diabetes—A randomized social experiment. <u>New England Journal of Medicine</u>, 365(16), 1509-1519.
- 12. Fauth, R.C.; Levanthal, T.; Brooks-Gunn, J. Short-term effects of moving from public housing in poor- to middle-class neighborhoods on low-income, minority adults' outcomes. Soc. Sci. Med. 2004, 59, 2271–2284

Week 7 February 13, 15

Hispanic and Immigrant Health Paradox

Objectives:

- 1. To present the descriptive evidence of the well-documented health advantage of immigrant infants
- 2. To present the descriptive evidence of the well-documented health advantage of immigrants at time of arrival in the USA
- 3. Describe intergenerational associations in infant health of immigrant families
- 4. Describe the health trajectories of immigrants as they spend time in the USA
- 5. Link immigrant health advantages to the human capital model of the demand for health and explain why it is a paradox
- 6. Apply the sociological perspective of weathering to the immigrant health paradox
- 7. Review potential explanations of the immigrant health paradox

Takeaways:

- 1. It is firmly documented that the health of immigrants at the time of birth and at time of arrival in the USA is better than US-born persons of similar age and sex
- 2. This health advantage of immigrants is a paradox because immigrant groups, on average, but not always, are disadvantaged in terms of socioeconomic status
- 3. Black immigrants have particularly large health advantages, but the health advantages of immigrants extends to most immigrant groups with some exceptions
- 4. The health advantage of immigrants despite economic disadvantage poses a challenge to arguments that socioeconomic status is an important determinant of health and racial and ethnic disparities in health
- 5. Immigrants are not a random sample of the origin population and selection of immigrants with respect to health may be a potential explanation of their health advantage at time of arrival in the USA
- 6. Other characteristics of immigrants (e.g., attitudes toward risk) may also explain the immigrant health advantage
- 7. The health of immigrants tends to converge to that of US-born persons between generations (with respect to infant health) and with time spent in the USA
- 8. Cultural factors—acculturation—that adversely affect health (e.g., diet and nutrition) is one potential explanation of the deterioration in health of immigrants with time in the USA
- 9. Return migration is also a possible explanation of the health advantage of immigrants, although this explanation pertains mostly to immigrants with high rates of return migration
- 10. Overall, there is not a consensus as to the cause of the immigrant health advantage and the convergence of immigrant health with time in the USA

Topics:

- 1. Hispanic/Immigrant paradox in context of infant health
- 2. Hispanic/Immigrant paradox in context of adult health
- 3. Explanations of Hispanic/immigrant paradox

Readings Infants:

- 1. Chapters 11, 14 LaViest et al.:
- 2. Singh, G. K., & Yu, S. M. (1996). Adverse pregnancy outcomes: differences between US-and foreign-born women in major US racial and ethnic groups. *American journal of public health*, 86(6), 837–843. https://doi.org/10.2105/ajph.86.6.837
- 3. Robert A. Hummer, Daniel A. Powers, Starling G. Pullum, Ginger L. Gossman, W. Parker Frisbie; Paradox found (again): Infant mortality among the Mexican-origin population in the united states. *Demography* 1 August 2007; 44 (3): 441–457.
- 4. Sanchez-Vaznaugh EV, Braveman PA, Egerter S, Marchi KS, Heck K, Curtis M. Latina Birth Outcomes in California: Not so Paradoxical. Matern Child Health J. 2016 Sep;20(9):1849-60.

- Fishman SH, Morgan SP, Hummer RA. Smoking and Variation in the Hispanic Paradox: A Comparison of Low Birthweight Across 33 US States. Popul Res Policy Rev. 2018 Oct;37(5):795-824
- 6. Ceballos, M., & Palloni, A. (2010). Maternal and infant health of Mexican immigrants in the USA: the effects of acculturation, duration, and selective return migration. *Ethnicity & health*, 15(4), 377–396.
- 7. Andrasfay, Theresa^a; Goldman, Noreen^a Intergenerational Change in Birthweight, Epidemiology: September 2020 Volume 31 Issue 5 p 649-658
- 8. Landale, Nancy S., Oropesa, R.S., Llanes, Daniel, and Bridget Gorman. Does Americanization have Adverse Effects on Health?: Stress, Health Habits, and Infant Health Outcomes among Puerto Ricans. <u>Social Forces</u> 78(2):613-641, 1999.

Readings Adults:

- 1. Crimmins EM, Kim JK, Alley DE, Karlamangla A, Seeman T. Hispanic paradox in biological risk profiles. *Am J Public Health*. 2007 Jul;97(7):1305–1310
- 2. Boen CE, Hummer RA. Longer—but Harder—Lives?: The Hispanic Health Paradox and the Social Determinants of Racial, Ethnic, and Immigrant—Native Health Disparities from Midlife through Late Life. *Journal of Health and Social Behavior*. 2019;60(4):434-452.
- 3. Singh, G.K., & Siahpush, M. (2002). Ethnic-Immigrant Differentials in Health Behaviors, Morbidity, and Cause- Specific Mortality in the United States: An Analysis of Two National Data Bases. Human Biology, 74(1), 83–109.
- 4. Hamilton, T.G.; Green, T.L. From the West Indies to Africa: A universal generational decline in health among blacks in the United States. Soc. Sci. Res. 2018, 73, 163–174. [
- 5. Palloni, A., & Arias, E. (2004). Paradox Lost: Explaining the Hispanic Adult Mortality Advantage. Demography, 41, 385–415. 10.1353/dem.2004.0024
- 6. Fenelon A. Revisiting the Hispanic mortality advantage in the United States: the role of smoking. Soc Sci Med. 2013 Apr;82:1-9

Week 8, February 20, 22

Exposure to Racism and Health

Objective:

- 1. Review the conceptual model linking race to racism to distal (e.g., income) and proximate (e.g., quality of medical treatment) causes of health
- 2. Describe methodological approaches to measuring exposure to racism and its appropriateness vis-à-vis the economic model of the demand for health
- 3. Review studies that use biomarkers to measure the effect of racism on health
- 4. Review studies that use survey data to measure the effect of racism on health
- 5. Discuss the quality of the evidence on the role of racism as a cause of health

Takeaway:

- 1. Personal exposure to racism is highly prevalent throughout the life course
- 2. There are plausible biological responses to racism that would adversely affect health of those exposed
- 3. Racism is a fundamental cause of health and is a "cause of causes", for example, a plausible explanation of differences in socioeconomic status and health behaviors that affect health
- 4. The use of biomarkers to identify the effect of racism on health is an interesting development because they are objective measures of health, although the linkage between biomarkers and health, for example, mortality is not always as tight as would be ideal
- 5. Evidence of the effect of racism on health that makes use of biomarkers is inconclusive
- 6. Traditional survey approaches used to measure exposure to racism are relatively crude and are often measured at a specific age
- 7. Conceptually, health is produced over the life course and discrimination occurs throughout the lifecycle, which suggest the need for multiple measurement of exposure to racism over the lifecycle
- 8. Evidence identifying the importance of discrimination at different points in the lifecycle is incomplete, inconsistent and plagued by empirical problems familiar to all observational studies
- 9. Because race, and racism, cannot be experimentally manipulated, studies of the effect of racism on health are almost all observational in nature and subject to likely omitted variable bias
- 10. Overall, the empirical evidence on the effect of racism on health is not compelling because of the empirical difficulty associated with answering the research question in a credible way

Topics:

- 1. Causal pathways linking race to racism to health
- 2. Review of studies using biomarkers to measure health and racism's effect on health
- 3. Review of observational studies using survey methods to measure health and racism's effect on health

Readings:

- 1. Chapters 6-9 La Viest et al.
- 2. Williams, D. R., & Mohammed, S. A. (2013). Racism and Health I: Pathways and Scientific Evidence. American Behavioral Scientist. 57(8), 1152–1173
- 3. Williams, D.R., Lawrence, J.A., Davis, B.A., Vu, C. (2019). "Understanding How Discrimination Can Affect Health." <u>Health Services Research</u>, 54 (S2): 1374-1388.

Representative Biomarker Studies

- 4. Liu SY, Kawachi I. Discrimination and telomere length among older adults in the United States. *Public Health Rep.* 2017;132(2):220-230
- 5. Chae, D. H., Wang, Y., Martz, C. D., Slopen, N., Yip, T., Adler, N. E., Fuller-Rowell, T. E., Lin, J., Matthews, K. A., Brody, G. H., Spears, E. C., Puterman, E., & Epel, E. S. (2020). Racial discrimination and telomere shortening among African Americans: The

- Coronary Artery Risk Development in Young Adults (CARDIA) Study. *Health psychology* : official journal of the Division of Health Psychology, American Psychological Association, 39(3), 209–219. https://doi.org/10.1037/hea0000832
- 6. Crimmins EM, Thyagarajan B, Levine ME, Weir DR, Faul J. Associations of Age, Sex, Race/Ethnicity, and Education With 13 Epigenetic Clocks in a Nationally Representative U.S. Sample: The Health and Retirement Study. J Gerontol A Biol Sci Med Sci. 2021 May 22;76(6):1117-1123

Representative Observational Studies

- Chae DH, Nuru-Jeter AM, Lincoln KD, Jacob Arriola KR. (2012). Racial discrimination, mood disorders, and cardiovascular disease among black Americans. Ann Epidemiol 22:104–11
- 8. Dunlay, S. M., Lippmann, S. J., Greiner, M. A., O'Brien, E. C., Chamberlain, A. M., Mentz, R. J., & Sims, M. (2017). Perceived Discrimination and Cardiovascular Outcomes in Older African Americans: Insights From the Jackson Heart Study. *Mayo Clinic proceedings*, 92(5), 699–709.
- 9. Monk EP Jr. 2015 The Cost of Color: Skin Color, Discrimination, and Health among African-Americans. American Journal of Sociology 121: 396–444

Week 9, February 27, 29

Racism in the Provision of Healthcare

Objectives:

- 1. Present evidence related to racial differences in the quantity and quality (consequence, or productivity) of medical care
- 2. Describe how provider bias is typically measured and used in empirical research
- 3. Review studies of the extent and consequences of provider bias on treatment decisions
- 4. Review studies of the role of racial concordance between patient and provider on health
- Illustrate geographic variation in hospital quality and how it relates to racial disparities in health

Takeaways:

- 1. Evidence suggests that health care providers, like people in other occupations, have some explicit and implicit racial and ethnic biases
- 2. The evidence on whether provider bias affects treatment decisions is non-uniform, although there are some salient pieces of evidence, for example, with respect to pain management
- 3. There is little credible evidence that provider bias is associated with health outcomes
- 4. Overall, while there is the potential for racial bias to adversely affect treatment and health, evidence of such a causal pathway and explanation of racial disparities in health is not definitive
- 5. Related to provider bias, is the quality of communication between patient and provider.
- 6. There is growing evidence that racial concordance between patient and provider enhances communication and can explain some portion of racial disparities in health
- 7. A particularly relevant example is found in a few studies that used barbershops to communicate dangers of certain health conditions and provide additional evidence of the importance of trust and communication between provider and patient
- 8. The analysis of the legacy of the Tuskegee experiment on Black men's health provides additional evidence of the role of trust and communication and how it can cause racial disparities in health
- 9. Inpatient care comes at a critical time in the course of disease and can have an important impact on health
- 10. There is some, but not uniform evidence that racial disparities in the quality of hospitals can explain a portion of racial disparities in health
- 11. Overall, while there is clearly potential for provider bias, which has been documented, to cause racial and ethnic disparities in health, the evidence is not definitive that this possibility is a major explanation of racial disparities in health

Topics:

- 1. Review evidence of racial differences in the productivity of medical care
- 2. Measuring provider implicit and explicit bias
- 3. Studies of provider bias and treatment decisions
- 4. Studies of the effects of racial concordance between patient and provider on health
- 5. The legacy of Tuskegee experiment
- Geographic variation in the quality of hospital care and is relation to racial disparities in health

- 1. Chapters 28-31 La Viest et al.
- 2. van Ryn, M.; Burgess, D.J.; Dovidio, J.F.; Phelan, S.M.; Saha, S.; Malat, J.; Griffin, J.M.; Fu, S.S.; Perry, S. The impact of racism on clinician cognition, behavior, and clinical decision making. Du Bois Rev. 2011, 8,199–218.
- 3. Haider, Adil H., Eric B. Schneider, N. Sriram, Valerie K. Scott, Sandra M. Swoboda, Cheryl K. Zogg, Nitasha Dhiman et al. "Unconscious race and class biases among

- registered nurses: vignette-based study using implicit association testing." Journal of the American College of Surgeons 220, no. 6 (2015): 1077-1086.
- 4. Hirsh, Adam T., Nicole A. Hollingshead, Leslie Ashburn-Nardo, and Kurt Kroenke. "The interaction of patient race, provider bias, and clinical ambiguity on pain management decisions." The Journal of Pain 16, no. 6 (2015): 558-568.
- 5. Green AR, Carney DR, Pallin DJ, Ngo LH, Raymond KL, Iezzoni LI, Banaji MR. 2007. Implicit bias among physicians and its prediction of thrombolysis decisions for black and white patients. J Gen Intern Med. Sep;22(9):1231-8.
- Cooper, L.A.; Roter, D.L.; Carson, K.A.; Beach, M.C.; Sabin, J.A.; Greenwald, A.G.; Inui, T.S. The Associations of Clinicians' Implicit Attitudes About Race With Medical Visit Communication and Patient Ratings of Interpersonal Care. Am. J. Public Health 2012, 102, 979–987.
- 7. Cooper, L.A.; Powe, N.R. Disparities in Patient Experiences, Health Care Processes, and Outcomes: The Role of Patient-Provider Racial, Ethnic, and Language Concordance; Commonwealth Fund (Publication #753): New York, NY, USA, 2004.
- 8. Marcella Alsan, Owen Garrick, and Grant Graziani. Does Diversity Matter for Health? Experimental Evidence from Oakland. American Economic Review 2019, 109: 4071–4111
- 9. Frakes, Michael D., and Jonathan Gruber. Racial Concordance and the Quality of Medical Care: Evidence from the Military. No. w30767. National Bureau of Economic Research, 2022.
- 10. Victor, Ronald G., Kathleen Lynch, Ning Li, Ciantel Blyler, Eric Muhammad, Joel Handler, Jeffrey Brettler et al. "A cluster-randomized trial of blood-pressure reduction in black barbershops." New England Journal of Medicine 378, no. 14 (2018): 1291-1301.
- Ronald G. Victor, Ciantel A. Blyler, Ning Li, Kathleen Lynch, Norma B. Moy, Mohamad Rashid, L. Cindy Chang, Joel Handler, Jeffrey Brettler, Florian Rader and Robert M. Elashoff. Sustainability of Blood Pressure Reduction in Black Barbershops. Circulation. 2019;139:10–19
- 12. Victor, R.G., Lynch, K., Li, N., Blyler, C., Muhammad, E., Handler, J., Brettler, J., Rashid, M., Hsu, B., Foxx-Drew, D. and Moy, N., 2018. A cluster-randomized trial of blood-pressure reduction in black barbershops. New England Journal of Medicine, 378(14), pp.1291-1301.
- 13. Alsan M, Wanamaker M. Tuskegee And The Health Of Black Men. Q J Econ. 2018 Feb;133(1):407-455. doi: 10.1093/qje/qjx029. Epub 2017 Aug 2. PMID: 30505005; PMCID: PMC6258045.
- 14. Chapter 35 La Viest et al.
- 15. Baicker K, Chandra A, Skinner JS. Geographic variation in health care and the problem of measuring racial disparities. Perspect Biol Med. 2005 Winter;48(1 Suppl):S42-53.
- Chandra, Amitabh, Pragya Kakani, and Adam Sacarny. "Hospital Allocation and Racial Disparities in Health Care." NBER Working Paper Series, No. 28018, November 2020.
- 17. Silber JH, Rosenbaum PR, Kelz RR, Gaskin DJ, Ludwig JM, Ross RN, Niknam BA, Hill A, Wang M, Even-Shoshan O, Fleisher LA. Examining Causes of Racial Disparities in General Surgical Mortality: Hospital Quality Versus Patient Risk. Med Care. 2015 Jul;53(7):619-29