

Racial and Ethnic Disparities in Health Care

Chapter 11 | Part 1 – The Profession of Medicine

KEY CLINICAL POINTS

- 1 Race is a social category without biological foundation; disparities are driven by structural racism and psychosocial stress.
- 2 The 'weathering' effect describes accelerated disease risk, aging, and premature death from chronic psychosocial stress.
- 3 Life expectancy gaps exist significantly between racial groups; cardiovascular diseases account for 35% of black-white life expectancy differences (males) and 52% when diabetes is included (females).
- 4 During the COVID-19 pandemic, American Indian/Alaska Native populations experienced a 6.6-year decline in life expectancy, compared to 4.2 years for Hispanics, 4.0 years for blacks, 2.4 years for whites, and 2.1 years for Asians.
- 5 CKD-EPI equations including a race factor increase eGFR by 15.9% for black patients, potentially delaying nephrology referral; Cystatin C-based eGFR is more accurate and does not require race adjustment.
- 6 Significant disparities exist in quality measures (e.g., pneumonia, CHF, pain management, and surgical outcomes).
- 7 Communication barriers for patients with limited English proficiency (LEP) lead to higher rates of adverse events and lower care quality.
- 8 Structural racism refers to the totality of ways that a society fosters, even in the absence of explicitly prejudiced individuals, discrimination through sociopolitical, legal, economic, and health structures.
- 9 Economic burden of racial/ethnic inequities is estimated between 421 billion and 451 billion (general) and 940 billion to 978 billion (adults without a college degree in 2018).
- 10 Systemic disparities are addressed through multi-level interventions: system-wide data tracking, provider bias training, and workforce diversification.
- 11 Significant disparities in perception of care: 65% of blacks and 58% of Hispanics felt treated unfairly in the past and fear unfair treatment in the future.
- 12 Communication barriers vary by ethnicity: 33% of Hispanics, 23% of African Americans, 27% of Asians, and 16% of whites reported communication problems with physicians.

DEFINITION & OVERVIEW

- **Definition:** Racial and ethnic disparities in health care refer to differences in quality of care received by minorities compared to whites, even when confounders such as stage of presentation, comorbidities, and health insurance are controlled.

- **Economic Impact:**

- Estimated burden: 421 billion to 451 billion (general population)
- Estimated burden: 940 billion to 978 billion (adults without a college degree in 2018)

- **Life Expectancy Trends:**

- Historical Gap: Reduced from 6.3 years (males) and 4.5 years (females) in 1975 to 3.6 years (males) and 3.0 years (females) in 2013.
- COVID-19 Impact:

- Overall U.S. decline: 2.7 years (2019–2021)
- American Indian/Alaska Native: 6.6-year decline
- Hispanic: 4.2-year decline
- Black: 4-year decline
- White: 2.4-year decline
- Asian: 2.1-year decline

EPIDEMIOLOGY

Life Expectancy by Race/Ethnicity and Sex (2020)

- **Data Points:**

- Non-Hispanic Asian female: 85.9 years
- Non-Hispanic Asian male: 81.1 years
- Non-Hispanic White female: 80.1 years
- Non-Hispanic White male: 74.8 years
- Hispanic female: 81.3 years
- Hispanic male: 74.6 years
- Non-Hispanic Black female: 75.4 years
- Non-Hispanic Black male: 67.8 years
- Non-Hispanic American Indian or Alaska Native female: 70.7 years
- Non-Hispanic American Indian or Alaska Native male: 63.8 years

Quality of Care Disparities

- **Measure Distribution:**

- 45% of quality measures (85 of 190): Blacks received worse care than whites.
- 45% of quality measures (47 of 110): American Indians and Alaska Natives received worse care than whites.
- >1/3 of quality measures (73 of 190): Hispanics, Asians, and Native Hawaiians/Pacific Islanders received worse care than whites.
- **Asian Population:** Received better care for approximately 28% of quality measures.
- **Stagnation:** For measures with disparities at baseline, >90% showed no improvement since 2000.

Geographic Variation

- **Factors Explaining County-Level Variation in Life Expectancy:**

- Socioeconomic and race/ethnicity factors: 60%
- Behavioral and metabolic risk factors (obesity, inactivity, smoking, hypertension, diabetes): 74%
- Health care factors (insurance coverage, primary care access, physician density): 27%

→ Combined impact of these three factors: 74% of variation.

ETIOLOGY & PATHOPHYSIOLOGY

Psychosocial Stress Mechanisms

- **Mechanism:** Psychosocial stress → hyperstimulation of the sympathetic-adrenal-medullary system and the hypothalamic-pituitary-adrenal axis.
 - Result: Vascular inflammation, endothelial dysfunction, neurohormonal dysregulation → accelerated cardiovascular disease.
- **Behavioral Adaptation:** Stress → increased smoking, decreased exercise/sleep, poorer medication adherence → increased risk.
- **Weathering Effect:**

→ **Definition:** Accelerated disease risk, aging, and premature death from chronic psychosocial stress.

Structural Racism

- **Definition:** Structural racism (sometimes called institutional racism) refers to the totality of ways that a society fosters, sustains, and reinforces discrimination through sociopolitical, legal, economic, and health structures that determine differential access to risks, opportunities, and resources that drive health and health care disparities.
 - **Key Feature:** Persists in institutions even in the absence of individuals who are explicitly racially prejudiced.

Biopsychosocial Model

- **Integration:** Combines social/physical environment with individual physical and psychological attributes.
 - **SDOH Model (NIMHD):** Adds a time element across the life course of the individual in recognition of the long-lasting health effects of socioeconomic exposures.
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CLINICAL FEATURES

Specific Condition Disparities

- **Pneumonia & CHF:** Blacks receive less optimal care than whites when hospitalized.
 - **End-Stage Renal Disease (ESRD):** Blacks are referred less often to the transplant list.
 - **Cardiac Procedures:** Blacks are referred less often for cardiac catheterization and bypass grafting.
 - **Pain Management:** Blacks and Hispanics/Latinos receive less pain medication for long-bone fractures and cancer.
 - **Lung Cancer:** Blacks receive less curative surgery for non-small-cell lung cancer.

End-Stage Renal Disease (ESRD) Disparities

- **CKD-EPI Equation Limitations:**
 - Accuracy: 80–90% of estimated GFR (eGFR) values are within $\pm 30\%$ of a patient's measured GFR.
 - Race Factor: Includes a factor that increases eGFR for any given serum creatinine by 15.9% for black patients compared to non-black patients of same age/sex.

→ **Consequence:** Disadvantages blacks for early nephrology referral, early treatment of advanced chronic kidney disease, and kidney transplantation.

- **Alternative:** Cystatin C–based eGFR is more accurate and does not require race adjustment.

Communication Barriers

- **Impact of Limited English Proficiency (LEP):**
 - Misunderstanding of diagnosis, treatment, and follow-up plans.
 - Inappropriate use of medications.
 - Lack of informed consent for surgical procedures.
 - Higher rates of adverse events with serious clinical consequences.
 - Lower-quality health care experience.
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DIFFERENTIAL DIAGNOSIS

- **Systemic Nature:** Racial and ethnic disparities are not a differential diagnosis but rather a systemic issue affecting care quality.
 - **Clinical Considerations for Minority Patients:**
 1. Access to appropriate diagnostic and therapeutic procedures.
 2. Adequacy of pain management.
 3. Appropriateness of referral for specialist care or transplantation.
 4. Impact of communication barriers on care quality.
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INVESTIGATIONS & DIAGNOSIS

Data Collection Requirements

- **IOM Recommendations:** Routine collection of a parsimonious panel of clinically significant SDOH measures in the electronic health record (EHR).
 - **Proposed 25-item Questionnaire Domains:** Race and ethnicity, education, financial resource strain, stress, depression, physical activity, tobacco use, alcohol use, social connection or isolation, intimate partner violence, residential address, and geocoded census tract median income.

National Data Sources

- **National Healthcare Quality and Disparities Report (since 2003):** Tracks access, affordability, care coordination, healthy living, patient safety, and quality of care across acute and chronic disease management.
 - **CDC SVI (since 2011):** Maps 15 social factors in four categories: socioeconomic status, housing composition and disability, minority status and language, and housing type and transportation.

Hospital Data Collection Statistics

- **Survey Results (2015):**
 - 98% of hospitals collected information on race.
 - 95% collected data on ethnicity.
 - 94% collected data on primary language.
 - **Gap in Benchmarking:** Only 45% collected data on race, 40% on ethnicity, and 38% on primary language to benchmark gaps in care.
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MANAGEMENT & TREATMENT

1. Health System Interventions:

1. Collect, report, and track data on health care access and use by patients' race/ethnicity.
2. Collect, report, and track SDOH data (implementation studies show this takes approximately 5 minutes).
3. Support the use of language interpretation services in the clinical setting.

2. Provider Interventions:

1. Address provider biases through training and awareness.
2. Utilize trained interpreters for patients with limited English proficiency.

3. Patient Interventions:

1. Build trust through transparent communication and culturally competent care.
2. Address mistrust (e.g., historical factors affecting perception of fairness).
3. Provide clear information about care options and procedures.

4. Workforce Diversity:

1. Increase the proportion of underrepresented minorities in the health care workforce.
2. Current Data (2021): 63.9% white, 6.9% Hispanic, 5.7% black/African American, 0.3% Native American/Alaskan Native.

PROGNOSIS & COMPLICATIONS

Mortality Trends

- **High Midlife Mortality:** Observed in non-Hispanic American Indian/Alaskan Native and non-Hispanic black adults.
 - **Cardiovascular Impact:** Cardiovascular diseases account for 35% of black-white life expectancy differences (males) and 52% when diabetes is included (females).

Quality Measure Trends

- **Stagnation of Improvement:** For measures showing disparities at baseline, >90% showed no improvement since 2000.
 - **Specific Group Outcomes:**
 - Black: 85 of 190 measures worse.
 - AI/AN: 47 of 110 measures worse.
 - Hispanic: 73 of 190 measures worse.

SPECIAL CONSIDERATIONS

Limited English Proficiency (LEP)

- **Risk Factors:** Failure to provide professional interpreters leads to:
 - Misunderstanding of diagnosis, treatment, and follow-up plans.
 - Inappropriate use of medications.
 - Lack of informed consent for surgical procedures.
 - Higher rates of adverse events with serious clinical consequences.

Health Literacy

- **High Risk Groups:** Individuals with limited English, low health literacy, or mistrust of the system.
 - **Consequences:** Difficulty navigating systems, obtaining referrals, preparing for procedures (e.g., colonoscopy), or following up on abnormal tests (e.g., mammogram).

Mistrust of Health Care System

- **Impact on Alliance:** Mistrust correlates with lower satisfaction and poorer adherence.
 - **Clinical Consequences:** Inconsistent care, 'doctor-shopping', self-medication, and increased demand for referrals/tests.
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KEY PEARLS & CLINICAL TRAPS

Must-Not-Miss Diagnoses

- **Clinical Audit:** Ensure patients from minority populations have:
 1. Access to appropriate procedures.
 2. Adequate pain management.
 3. Appropriate referrals for specialty care/transplant.
 4. Clear communication (no language barriers).

Common Diagnostic Pitfalls

- **Stereotyping:** Using social categories (race, gender, age) to simplify decision-making can lead to systematic bias.

Useful Mnemonics

- **Weathering effect:** accelerated disease risk, aging, and premature death from chronic psychosocial stress.
 - **Structural racism:** societal structures that foster discrimination through sociopolitical, legal, economic, and health systems.
 - **Biopsychosocial model:** brings together the social and physical characteristics of the environment with individual physical and psychological attributes.