

Foreword on Moving Forward

Language about **identity**, **diversity**, **equity**, and **inclusion** evolves relatively quickly. The language and terms used throughout this course reflect contemporary best practice and guidance. To ensure continuous alignment with current best practice, terminology will be reviewed and updated as guidelines evolve. For example, when color is used regarding race, capital letters are used (e.g., Black, White, Brown), as recommended by the National Association of Black Journalists

CMEO BriefCase

Take Action: Optimizing Equity in Cardiology Care

*Supported by an educational grant provided
by Johnson & Johnson.*

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Foundational Activities

**Racial/Ethnic Disparities
in Cardiac Care: Real-
World Strategies to
Address Inequities in
Treatment and
Outcomes**

**Cardiology: Real-World
Tactics to Address
Health Inequities**

Learning Objective

Identify health inequities in the diagnosis, treatment, and outcomes in patients with cardiovascular disorders.

Audience Response



How confident are you in your ability to identify disparities in access to health care and other social and economic resources for patients with cardiac conditions?

- A. Not at all confident
- B. Somewhat confident
- C. Confident
- D. Extremely confident

Patient Case: Derrik (he/him)



- 40-year-old African American male, Afghanistan-Iraqi war veteran with a history of hypertension
- Currently works as an administrative assistant for 55+ hours a week in a high-stress stockbroker firm
- Family history of early myocardial infarction (before age 55) and stroke
- Enjoyed endurance running in adolescence and has taken it up again to be “healthier”
- Uses ibuprofen daily for back and neck pain
- Visiting primary care today for “anxiety attacks” and “chest pain”
- Current meds: HCTZ 50 mg daily and amlodipine 5 mg BID

Audience Response



Which of the following statements regarding disparities in uncontrolled hypertension is most accurate?

- A. White LGBTQIA+ patients are treated at the same rate as non-LGBTQIA+ White patients
- B. Exposure to wildfires and burn pits do not have any influence on cardiovascular or hypertension outcomes
- C. High work demands and low control jobs influence uncontrolled hypertension for men but not for women
- D. Hypertension is diagnosed earlier in non-Hispanic Black patients than in non-Hispanic White patients
- E. I don't know

Disparities in Diagnosis



Non-Hispanic Black patients are diagnosed with hypertension earlier in life, but experience **4-5x greater hypertension mortality** when compared to non-Hispanic White patients



Both men and women undergoing high work demands have **higher prevalence** of uncontrolled hypertension



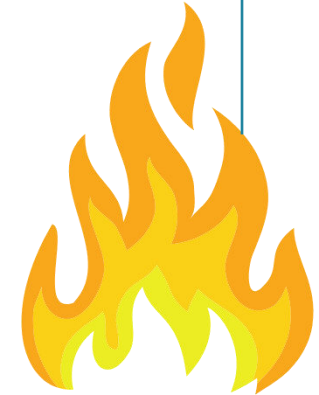
Underserved **racial and ethnic** populations as well as the **LGBTQIA+** community are at **higher risk** of untreated hypertension



The majority of **Veterans** with uncontrolled BP and at least one **CVD risk factor** still had **uncontrolled BP** after 5 years of follow-up



Exposure to wildfires can increase **cardiac risks**; exposure to burn pits can increase **hypertension risks and other conditions** such as Afib, pulmonary embolism, ischemic heart disease, and stroke



CVD = cardiovascular disease; BP = blood pressure; Afib = atrial fibrillation.

Abrahamowicz AA, et al. *Curr Cardiol Rep*. 2023;25(1):17-27. Yamada M, et al. *J Hypertens*. 2023;41(6):995-1002. Savitz DA, et al. *JAMA Netw Open*. 2024;7(4):e247629-e247629. Lavigne-Robichaud M, et al. *Hypertens Res*. 2019;42(10):1616-1623. Sharma Y, et al. *Circ-Cardiovasc Qual*. 2022;15(12):e008999. Taweh O, et al. *Am J Physiol Heart Circ Physiol*. 2023;325(3):h522-h528. Ogunniyi MO, et al. *J Am Coll Cardiol*. 2021;78(24):2460-2470. Jones CG, et al. *J Am Heart Assoc*. 2020;9(8):e014125. American Red Cross. 2023. <https://newsroom.heart.org/news/wildfires-may-fuel-heart-health-hazards-smoke-exposure-increases-cardiovascular-risks>. American Heart Association. 2020. <https://www.heart.org/en/news/2020/11/09/fighting-fires-raises-risk-for-irregular-heartbeat>.

Patient Case: Derrik (he/him)



- Vitals:
 - Blood pressure: 157/94
 - Heart rate: 58 bpm
 - Height: 6'3"
 - Weight: 245 lbs
 - BMI: 30.6 kg/m²
- Labs:
 - LDL: 160 mg/dL
 - Race-free eGFR: 64 mL/min/1.73m² (down from 3 months ago)
 - Triglycerides: 178 mg/dL
 - Proteinuria: 15 mg/mmol
 - CHA₂DS₂: 1
- Tests ordered: EKG and echocardiogram
- Patient expresses concerns about any medications that will make him feel tired, fatigued, or decrease his libido

Audience Response



Which of the following statements regarding disparities in the treatment of uncontrolled hypertension is most accurate?

- A. Asian patients have similar control rates as non-Hispanic White patients
- B. Economic and social conditions do not play a role in uncontrolled hypertension or treatment-resistant hypertension
- C. Latine and Asian patients have lower hypertension awareness compared to Black and White patients with hypertension
- D. Black patients should always be given first-line calcium antagonists or thiazide diuretics for hypertension per evidence-based practice
- E. I don't know

Disparities in Treatment



Hypertension control rates are lower for patients from **underserved racial and ethnic populations, especially Asian and Black patients**, compared to non-Hispanic White patients



People who experience greater **adverse effects** of economic and social conditions are **more likely** to suffer **uncontrolled and treatment-resistant hypertension**, Afib, and sequelae such as stroke



Race-based prescription **failed to improve hypertension control** rates in non-Hispanic adults despite a greater use of the **recommended evidence-based monotherapy**



Latine and Asian patients have **lower hypertension awareness** compared to White and Black patients with hypertension; health literacy may be a contributing factor

Abrahamowicz AA, et al. *Curr Cardiol Rep*. 2023;25(1):17-27. National Institutes of Health. 2024. <https://www.nih.gov/news-events/news-releases/adverse-social-determinants-health-linked-treatment-resistant-hypertension-black-americans>. Akinyelure O, et al. *Hypertension*. 2023;80(7):1403-1413. Flack JM, et al. *Hypertension*. 2021;78(6):1719-1726. Aggarwal R, et al. *Hypertension*. 2021;78(6):1719-1726. Du S, et al. *Int J Nurs Sci*. 2018;5(3):301-309. Kanejima Y, et al. *Patient Educ Couns*. 2022;105(7):1793-1800. Benjamin EJ, et al. *JAMA Cardiology*. 2023;8(2):182-191. Centers for Disease Control and Prevention [CDC]. 2024. <https://www.cdc.gov/heart-disease/about/atrial-fibrillation.html>.

Patient Case: Derrik (he/him)



- EKG: generally normal with a notched, prolonged P wave
- BPs: multiple elevated readings at home and in the office
- Echocardiogram: increased left atrial volume
- Dx: uncontrolled hypertension, CVD, CKD stage II, angina
- HCP discusses appropriate treatment options with Derrik using SDM and discusses risks of Afib and ACS

Audience Response



Given Derrik's laboratory values and HCP assessment, what treatment option would be most appropriate for this patient?

- A. Add a beta blocker
- B. Change amlodipine to another calcium channel blocker
- C. Add spironolactone to HCTZ and amlodipine
- D. Add an ACE or ARB
- E. I don't know

Disparities in Outcomes



Black patients with hypertension experience more hypertension-related morbidity and mortality than non-Hispanic White patients

Black patients have a 30% higher risk of fatal stroke, 50% higher risk of cardiovascular mortality, and more than 4x higher risk of end-stage renal disease

CVD is the leading cause of death among Latine individuals in the U.S.

American Indian and Alaska Native individuals have a significant burden of CVD, with higher mortality and morbidity most likely due to hypertension

Individuals residing in neighborhoods exposed to historical redlining practices are at increased risk of CVD among those living with CKD and heart failure



Learning Objective

As a member of the health care team, implement actionable, collaborative strategies to improve health equity.

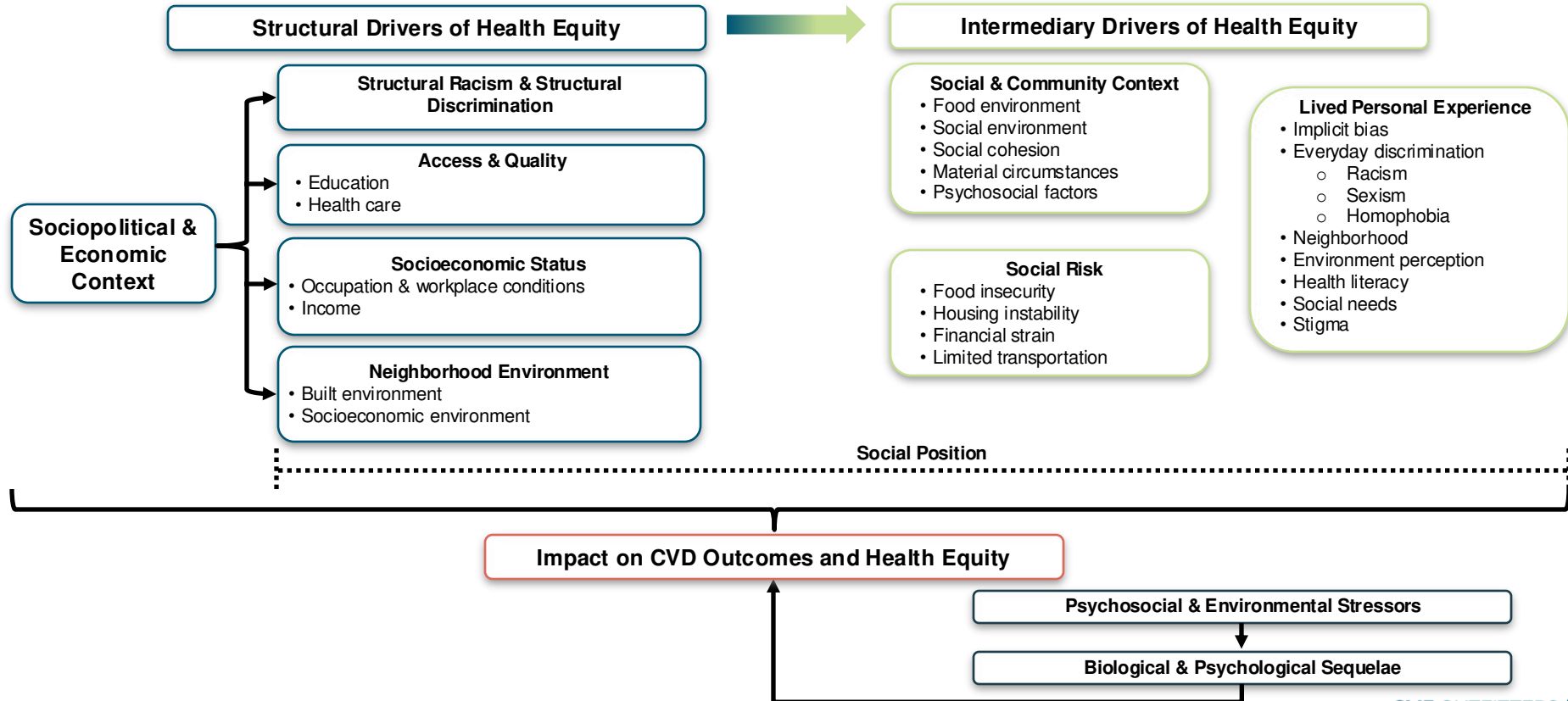
Audience Response



How confident are you in your ability to utilize an appropriate social drivers of health (SDoH) screening that considers factors such as lived environment, diet, and other drivers of health when caring for patients with cardiac conditions?

- A. Not at all confident
- B. Somewhat confident
- C. Confident
- D. Extremely confident

Actionable Strategies: Screening SDoH in Uncontrolled Hypertension



Patient Case: Derrik (he/him)



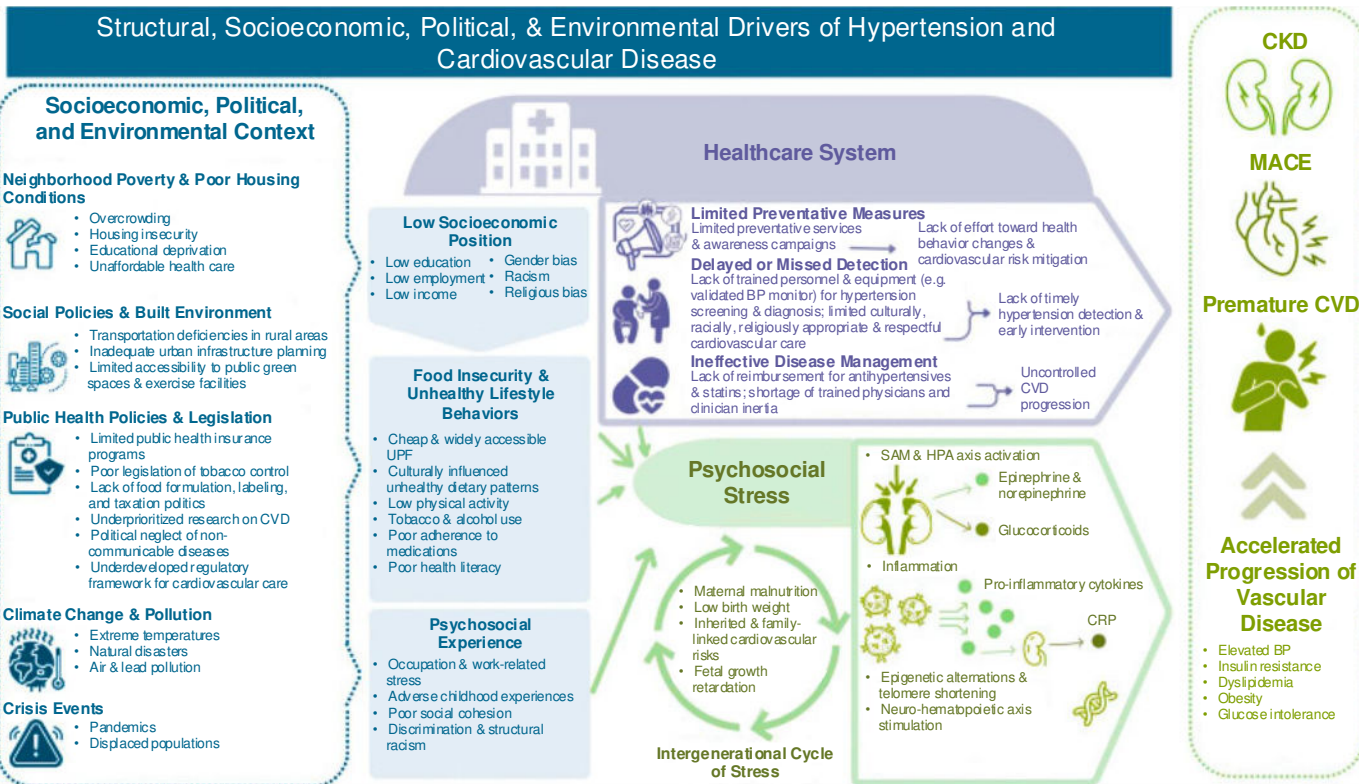
- Patient undergoes SDoH screening from HCP
- Patient lives in Bodfish, California and frequently commutes long distances to Los Angeles for work (can't afford the cost of living and stays in his car or "couch surfs" with friends at times to stay closer to work)
- Patient has 3 children and caregiving responsibilities for an aging mother
- Patient has frequent exposure to wildfires and pollution
- Patient has difficulty affording medication and endorses socioeconomic difficulties
- Patient frequently eats out and gets single-serving frozen meals

The Impact of Uncontrolled Hypertension Through a SDoH Lens

- Unhoused individuals are 2-4x more likely to have hypertension and other CVDs at younger ages; as many as 50% of unhoused individuals live in vehicles
- Short- and long-term exposure to pollution (via commute, city environment, or exposure to wildfire) contribute to high blood pressure and conditions such as Afib
- Ultra-processed food (UPF), which is highly palatable and inexpensive, is an exposure factor for the development of arterial hypertension
- Affordability of blood pressure-lowering medications can affect outcomes and adherence
- Low health literacy limits a patient's ability to understand and increase their knowledge about hypertension and CVD

Yale University. 2024. <https://happy.sites.yale.edu/barriers-care>. Giamarino C, et al. *J Am Plann Assoc*. 2023;89(1):80-92. Tykhonova S. European Society of Cardiology Website. 2022. <https://www.escardio.org/Journals/E-Journal-of-Cardiology-Practice/Volume-22/the-effect-of-pollution-on-hypertension-and-on-the-total-risk-score-in-hypertens>. Prabhakaran D, et al. *Hypertension*. 2020;76(4):1289-1289. Hadley MB, et al. *Circ*. 2022;146(10):788-801. Johnston JE, et al. *J Expo Sci Environ Epidemiol*. 2024;34(3):505-511. Young MT, et al. *Ann Intern Med*. 2023;176(12):1586-1584. Barbosa SS, et al. *Nutrients*. 2022;14(6). Harrison MA, et al. *Pan Afr Med J*. 2021;39:184. Attaei MW, et al. *Lancet Public Health*. 2017;2(9):e411-e419. LeWine HE, et al. Harvard Health Publishing Website. 2015. <https://www.health.harvard.edu/blog/millions-skip-medications-due-to-their-high-cost-201501307673>. Du S, et al. *Int J Nurs Sci*. 2018;5(3):301-309. Kanejima Y, et al. *Patient Educ Couns*. 2022;105(7):1793-1800. Wass SY, et al. *Circ Res*. 2024;134(8):1029-1045.

Actionable Strategies: Addressing SDoH in Uncontrolled Hypertension



Audience Response



How confident are you in your ability to manage cardiac conditions with a team-based or collaborative approach?

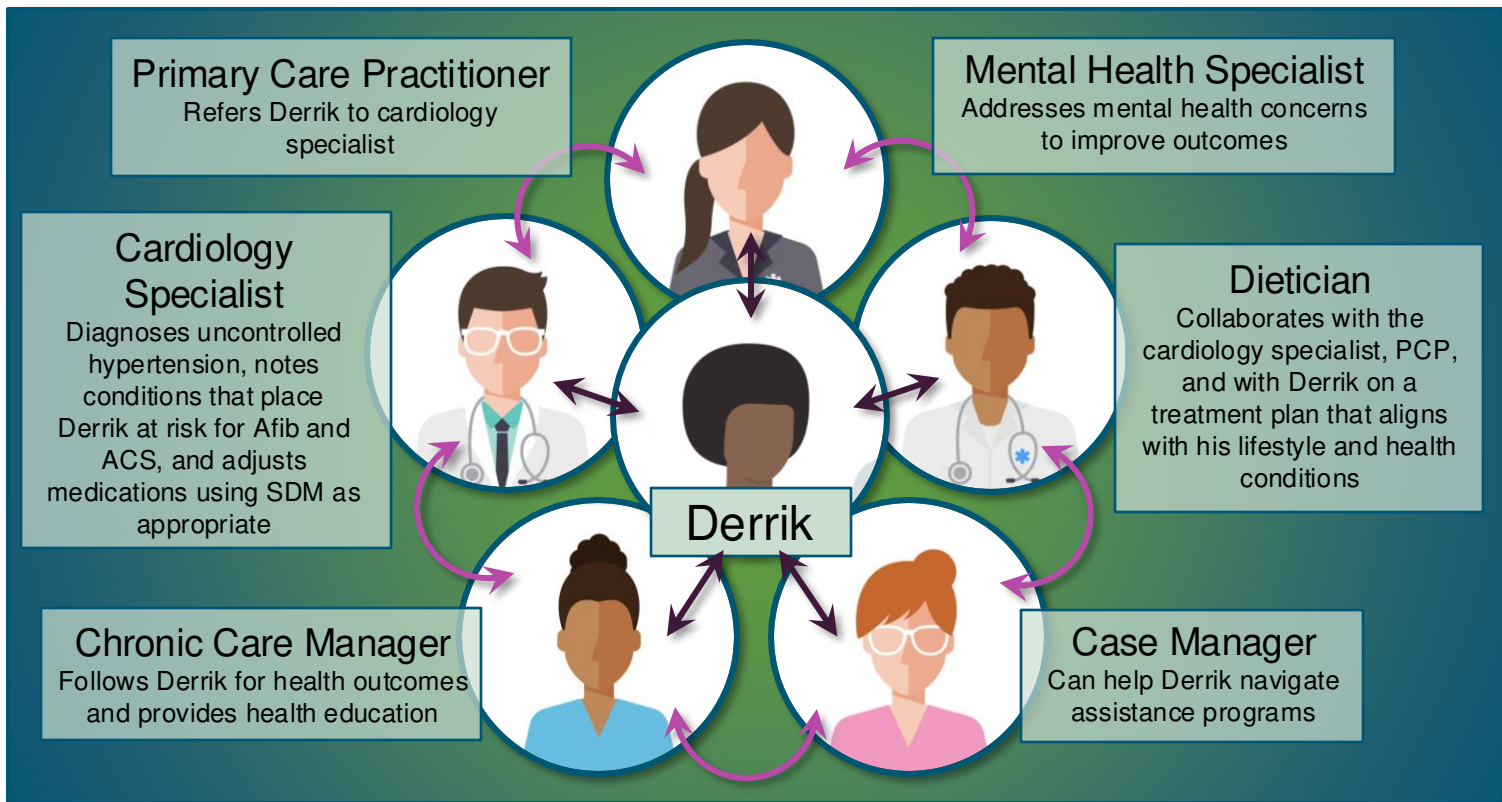
- A. Not at all confident
- B. Somewhat confident
- C. Confident
- D. Extremely confident

Patient Case: Derrik (he/him)



- HCP cautions that exercise reduces blood pressure in general, but more evidence is needed for resistant hypertension
- HCP also cautions that years of endurance exercise may place individuals at risk of Afib
- Case manager assists Derrik with exploring assistance programs
- HCP refers Derrik to a dietician to assist with identifying affordable options that align with his lifestyle and health conditions
- HCP refers Derrik to a mental health specialist, as mental health conditions can exacerbate medical conditions and vice versa
- HCP enrolls Derrik in chronic care management for continued health education that includes decreasing exposure to particle pollutants and chronic condition monitoring

Team-Based Approach for the Management of Cardiac Care



Audience Response



Now, how confident are you in your ability to identify disparities in access to health care and other social and economic resources for patients with cardiac conditions?

- A. Not at all confident
- B. Somewhat confident
- C. Confident
- D. Extremely confident

Audience Response



Now, how confident are you in your ability to utilize an appropriate SDoH screening that considers factors such as lived environment, diet, and other drivers of health when caring for patients with cardiac conditions?

- A. Not at all confident
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Audience Response



Now, how confident are you in your ability to manage cardiac conditions with a team-based or collaborative approach?

- A. Not at all confident
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SMART Goals

Specific, Measurable, Attainable, Relevant, Timely



- Identify disparities in the diagnosis and treatment of uncontrolled hypertension
- Identify disparities that increase the risk of cardiac conditions such as uncontrolled hypertension which when left unaddressed may progress to atrial fibrillation or acute coronary syndrome
- Integrate holistic treatment strategies, including SDoH screening, into the care of patients with cardiac conditions to improve equity in treatment outcomes
- Consider team-based strategies in the care of patients with cardiac conditions to address inequities in treatment outcomes



Engage in all of the activities in this series:

**Take Action:
Optimizing Equity in
Mental Health Care**

**Take Action:
Optimizing Equity in
Gastroenterology
Care**

**Take Action:
Optimizing Equity in
Bariatric Surgery
Care**

Diversity & Inclusion Hub



A robust hub of resources for continued education on diversity, equity, and inclusion in health care.

<https://www.cmeoutfitters.com/practice/diversity-and-inclusion-hub/>

To Receive Credit

To receive CME/CE credit for this activity, participants must complete the post-test and evaluation online.

Participants will be able to download and print their certificate immediately upon completion.