



Hawai'i Heart Disease and Stroke Plan 2030



**ONE PERSON DIES
EVERY 37 SECONDS
FROM CARDIOVASCULAR
DISEASE**

INTRODUCTION

Cardiovascular disease is a widespread and serious problem in both Hawai'i and the United States. Cardiovascular disease is a group of disorders related to the heart and blood vessels, and is the leading cause of death in Hawai'i.¹ Across the nation, one person dies every 37 seconds from cardiovascular disease.²

Two of the most common and deadly forms of cardiovascular disease include heart disease and stroke. Heart disease refers to several types of heart conditions, including coronary artery disease (CAD) or ischemic heart disease, which is the most common type of heart disease in the United States. CAD is caused by the restriction of blood flow to the heart due to a build-up of fatty deposits or plaque in the arteries. This plaque is made of cholesterol, and the process of plaque build-up is called atherosclerosis. Atherosclerosis can lead to chest pain (angina), shortness of breath, heart attack, or other symptoms.³ Often, heart disease goes undiagnosed due to lack of symptoms until a heart attack, heart failure, or arrhythmia occurs.⁴ Heart disease accounts for 1 in every 4 deaths in the U.S.^{5,6}

A stroke occurs when a blood vessel either becomes blocked (ischemic stroke) or ruptures (hemorrhagic stroke), affecting blood supply to the brain. Without

proper blood supply, brain cells are deprived of oxygen and start to die within minutes. Symptoms of stroke include sudden numbness or weakness on one side of the body, confusion, trouble speaking or understanding speech, trouble seeing, dizziness or loss of balance, and severe headache.⁷ Stroke accounts for 1 in every 19 deaths in the U.S.⁸ About 80% of strokes are preventable by reducing risk factors and making lifestyle changes.⁹

Modifiable risk factors for heart disease and stroke include:

- » High blood pressure
- » High blood cholesterol
- » Smoking
- » Type 2 diabetes
- » Poor diet and physical inactivity
- » Overweight and obesity

High blood pressure, also known as hypertension, is a major risk factor for heart disease and stroke. In fact, 7 of 10 people who have a first heart attack, and 3 of 4 people who have a stroke, have high blood pressure.¹⁰ Over time, high blood pressure can damage the lining of the arteries, making them more susceptible to plaque buildup.¹¹ About 45% of adults



in the U.S. have hypertension (defined as 130/80 mm Hg) or are taking medication for hypertension. However, only 1 in 4 people with hypertension have their blood pressure under control.¹² High blood cholesterol is also an important risk factor: high low-density lipoprotein (LDL) cholesterol can double one's risk for heart disease. About 1 in 3 adults in the U.S. have high cholesterol.¹³

The Hawai'i Heart Disease and Stroke Plan (HDSP) 2030 represents a coordinated effort between stakeholders and partners throughout the state, who worked together to develop objectives and strategies that utilize data, best practices, and

evidence-based science. The resulting HDSP 2030 reflects a common vision for preventing and managing heart disease and stroke to help the people of Hawai'i, especially those most at-risk, lead healthy lives.

The HDSP 2030 works in coordination with other chronic disease prevention and management efforts in the state, specifically the Healthy Hawai'i Strategic Plan 2030; the Hawai'i Asthma Plan 2030; the Hawai'i Cancer Plan 2030; the Hawai'i Diabetes Plan 2030; the Hawai'i Physical Activity and Nutrition Plan 2030; and the Hawai'i Tobacco Prevention and Control Plan 2030.



BACKGROUND

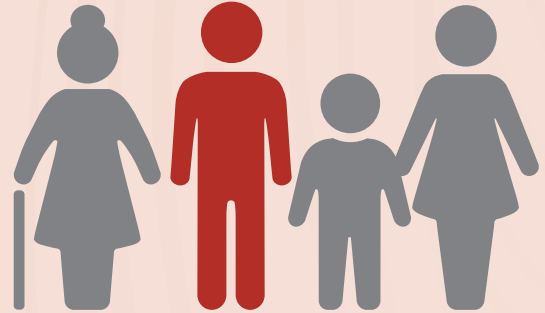
Cardiovascular disease is the leading cause of death for Americans. More than 859,000 adults in the U.S. die from heart disease, stroke, or other cardiovascular diseases each year, accounting for one third of all deaths.¹³ The burden of cardiovascular disease continues to grow as the associated risk factors for the disease also increase, such as obesity and type 2 diabetes. The American Heart Association predicts that by 2035, nearly half of the U.S. population (131.2 million people) will have at least one cardiovascular condition.* By age 45, one's risk for cardiovascular disease is 50% and increases with age.¹⁴

According to self-reported BRFSS data, approximately 3% of Hawai'i adults have heart disease, 3% have had a stroke, 32% (46% for Medicare population) have high blood cholesterol, and 34% (56% for Medicare population) have high blood pressure. Of those with high blood pressure, 25% have not taken any medications to control their condition, and 40% do not have their condition under control.¹⁵

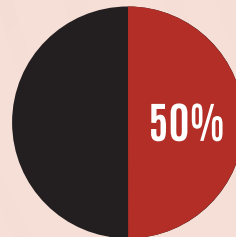
In addition to placing an enormous burden on Hawai'i's health, cardiovascular disease also poses a major threat to the economy. Currently it is America's costliest disease. Cardiovascular disease cost \$555 billion in 2016 and is projected to increase to \$1.1 trillion by 2035, including direct and indirect costs. Direct medical costs are more extensive for cardiovascular disease than any other disease, such as Alzheimer's and diabetes, and includes money spent on services provided within the health care system, prescription drugs, home health, and other related services.¹⁴ Additionally, cardiovascular conditions remain a major risk factor for serious illness and death related to COVID-19.¹⁶ Failure to combat the growing burden of cardiovascular disease can have devastating consequences, particularly among vulnerable populations that are disproportionately affected by the disease.

*Cardiovascular conditions include high blood pressure, coronary heart disease, stroke, congestive heart failure, and atrial fibrillation.

FOUR OUT OF FIVE STROKES CAN BE PREVENTED BY LIFESTYLE CHANGES:



Heart disease accounts for 1 in every 4 deaths in the U.S.



By 2035, nearly half of the US population **WILL HAVE SOME FORM OF CARDIOVASCULAR DISEASE**

STROKE ACCOUNTS FOR **one in every 19 deaths in the U.S.**

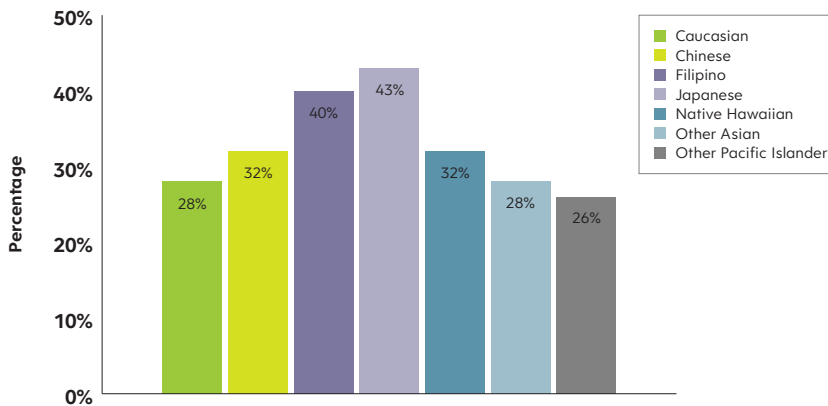


PRIORITY POPULATIONS

Despite Hawai'i being ranked third in the nation for heart health, there is still much more work to be done.¹⁷ Hawai'i has a large population of at-risk groups, such as Native Hawaiians and Other Pacific Islanders, who have higher rates of coronary heart disease, angina, history of a heart attack, and heart attack deaths than Caucasian persons.¹⁸ According to BRFSS data, Filipinos in Hawai'i also have significantly higher rates of high blood pressure, and Japanese have significantly higher rates of both high blood pressure and high blood cholesterol.^{19,15} Native Hawaiian, Other Pacific Islander, Filipino, and Japanese populations also are more likely to experience more risk factors tied to heart disease and stroke.

High Blood Pressure Prevalence

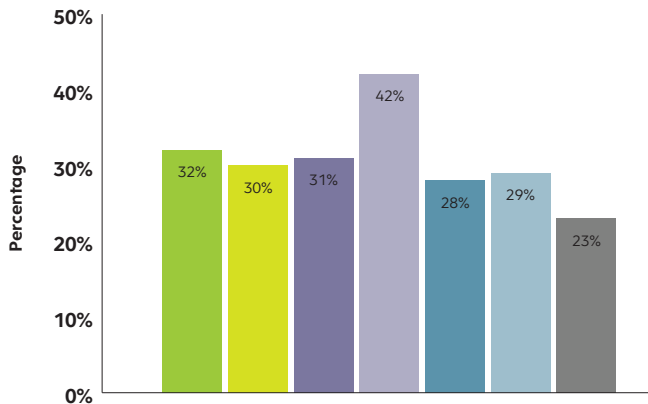
Japanese and Filipinos have the highest prevalence of **high blood pressure** in Hawai'i



Behavioral Risk Factor Surveillance System (2018)

High Blood Cholesterol Prevalence

Japanese, Caucasians, and Filipinos have the greatest prevalence of **high blood cholesterol** in Hawai'i

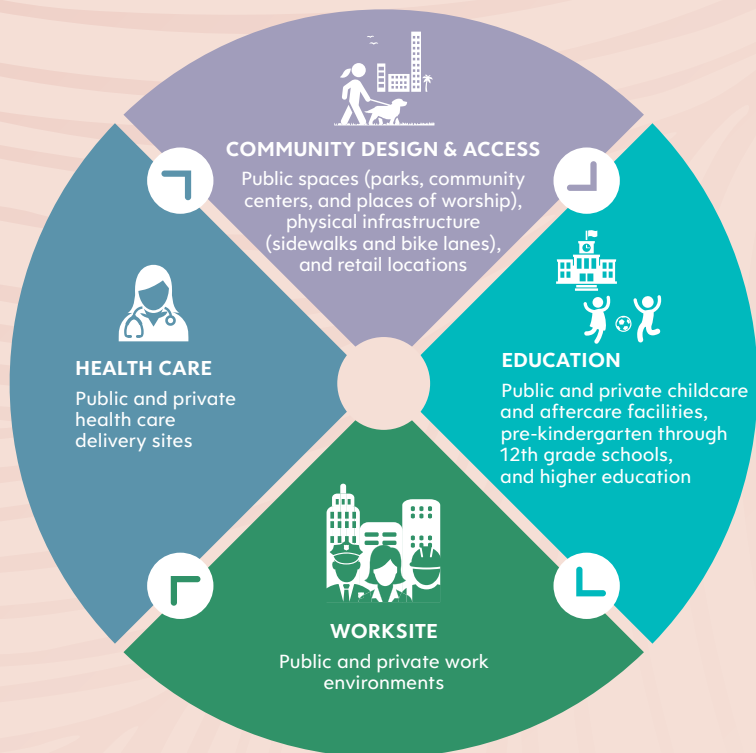


Behavioral Risk Factor Surveillance System (2017)



PLAN FRAMEWORK

The HDSP 2030 incorporates principles of the Social Ecological Model and is organized into four sector areas: Community Design and Access, Education, Health Care, and Worksite. The plan prioritizes goals, objectives, and strategies that lead to policy, systems, and environmental change. Objectives were developed using current data, best practices, and evidence-based science, and reflect one or more cross-cutting themes.*



SECTOR AREAS

Places (both physical & virtual) where policy, systems, and environmental change can be established to support the formation and maintenance of healthy behaviors, achieving health equity, and maximizing chronic disease prevention, management, and treatment.

» POLICY, SYSTEMS AND ENVIRONMENTAL CHANGE

Integral to the framework and design of the HDSP 2030 is the focus on policy, systems, and environmental change. The plan’s long-term goals, objectives, and strategies were developed to align with national guidelines and recommendations and to reflect or lead to policy, systems, or environmental change.

POLICY	SYSTEMS	ENVIRONMENTAL
<p>Policies at the legislative or organizational level.</p> <p>Institutionalizing new rules or procedures as well as passing laws, ordinances, or resolutions are examples of policy changes.</p>	<p>Changes made to rules within an organization.</p> <p>Systems change and policy change often work hand-in-hand. Often systems change focuses on changing infrastructure within a school, park, worksite, or health setting.</p>	<p>Changes that are made to the physical/built environment.</p> <p>Physical (structural changes or programs or service), social (a positive change in attitudes or behavior about policies that promote health) and economic factors (presence of financial disincentives or incentives to encourage a desired behavior).</p>

*Additional information on the plan framework can be found at the following website: www.HHSP.hawaii.gov



Objectives and Strategies

The HDSP 2030 objectives strive to create sustainable change that will transform our communities, schools, health care, and worksites to enhance heart disease and stroke prevention and management efforts and support the health of the people of Hawai'i. Stakeholders developed the HDSP 2030 objectives to shape policy, systems and environmental change in the four sector areas: Community Design and Access; Education; Health Care; and Worksite. The objectives are showcased by sector area and include key strategies, baseline, and target measures. The HDSP 2030 is meant to be a living document that is reviewed and updated throughout the plan's timeframe. Implementation of the plan will be a collective effort by individuals and organizations across the state.

*Additional background information, including definitions of some terminology used in the objectives and strategies, can be found at the following website: www.HHSP.hawaii.gov



Objectives with this icon are being worked on by multiple program areas.



Community Design and Access Sector Objectives

GOAL >> All of Hawai'i's people will live in communities that have access to tobacco- and nicotine-free settings, healthy food choices, physical activity opportunities, evidence-based chronic disease self-management programs, and minimal exposure to unhealthy options through policy, programs, communications, and environmental supports.

OBJECTIVE

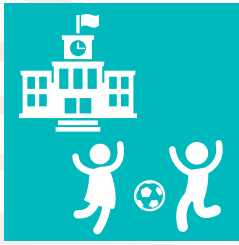
BASELINE: 0 TARGET: 2

HEART DISEASE AND STROKE-01

Develop and deliver at least two promotional activities to increase awareness of the preventability of heart disease and stroke.

STRATEGIES

- Identify stakeholders to establish a communications workgroup
- Convene communications workgroup regularly to develop messages tailored for targeted audience
- Identify media outlets that will reach targeted audience
- Disseminate messages through promotional activities (e.g., social media messages, posters, brochures, or other printed materials) and evaluate messages



Education Sector Objectives

GOAL >> All of Hawai'i's educational settings will promote tobacco- and nicotine-free lifestyles, healthy eating, daily physical activity, and health management through programs, policies, environmental supports, and professional development opportunities.

OBJECTIVE

BASELINE: 0 TARGET: 1

HEART DISEASE AND STROKE-02

Adopt a wellness policy designed to provide access to blood pressure cuffs and blood pressure education at public college campuses.

STRATEGIES

- Leverage partnerships within the University of Hawai'i system to identify campus wellness/health services coordinator
- Explore potential partnerships and link available resources at American Heart Association



Health Care Sector Objectives

GOAL >> All of Hawai'i's health care systems will promote health equity and maximize utilization of prevention, early detection, and evidence-based chronic disease self-management services by improving coverage, health information technology, programs, practices, and guidelines.

OBJECTIVE

BASELINE: 0 TARGET: 5

HEART DISEASE AND STROKE-03

ASTHMA-08 • DIABETES-05

By 2025, identify five measurable outcomes indicative of team-based care and monitor over time.

STRATEGIES

- Identify key stakeholders to establish a team-based care workgroup
- Convene team-based care workgroup regularly to identify measurable outcomes indicative of team-based care
- Report identified outcomes at least annually



OBJECTIVE

BASELINE: Pending TARGET: Increase by 5%

HEART DISEASE AND STROKE-04



ASTHMA-09 • DIABETES-06

Improve identified measurable team-based care outcomes by 5%.

STRATEGIES

- Implement priorities identified by the team-based care workgroup (e.g., increase use of pharmacists in medication management to increase physical patient panels, increase use of non-physician telehealth for Asthma Self-Management Education (ASME), or increase use of Community Health Workers (CHW) in patient care coordination)

OBJECTIVE

BASELINE: 0 TARGET: 1

HEART DISEASE AND STROKE-05

Establish coverage for medication therapy management and/or self-measured blood pressure monitoring by Medicaid.

STRATEGIES

- Identify and review existing literature/guidance on Medication Therapy Management (MTM) and Self-Measured Blood Pressure Monitoring (SMBPM) reimbursement
- Collaborate with Medicaid and provide guidance on reimbursement for MTM and/or SMBPM

OBJECTIVE

BASELINE: 0 TARGET: 6

HEART DISEASE AND STROKE-06



ASTHMA-06 • DIABETES-03

By 2025, identify six Health Information Technology priorities to enhance population health.

STRATEGIES

- Identify key Health Information Technology (HIT) stakeholders to establish a HIT workgroup
- Convene HIT workgroup regularly to identify the HIT priorities to enhance population health

OBJECTIVE

BASELINE: 0 TARGET: 50%

HEART DISEASE AND STROKE-07



ASTHMA-07 • DIABETES-04

Meet 50% of identified Health Information Technology priority goals.

STRATEGIES

- Implement priorities identified by the HIT workgroup (e.g., implement bidirectional referral systems between health care organizations and self-management education programs or create a GIS map of chronic disease cases to inform targeted health communication and resource utilization)



Worksite Sector Objectives

GOAL >> All of Hawai'i's worksites will create a culture of wellness through supportive programs and policies that promote tobacco-and nicotine-free workplaces; breastfeeding; healthy food and beverage choices; physical activity and active commuter opportunities; health screenings; and early detection, risk reduction, and self-management of chronic diseases.

OBJECTIVE

BASELINE: 0 TARGET: 1

HEART DISEASE AND STROKE-08

Establish at least one statewide policy designed to increase access to evidence-based chronic disease prevention and management programs that address heart disease and stroke at worksites.

STRATEGIES

- In collaboration with Objective Heart Disease and Stroke-09, identify stakeholders to establish an advisory group to develop a Hawai'i-specific worksite wellness recognition program
- Convene workgroup regularly to draft a policy

OBJECTIVE

HEART DISEASE AND STROKE-09

ASTHMA-11 • CANCER-13 • DIABETES-07
PHYSICAL ACTIVITY AND NUTRITION-19 • TOBACCO-12

Implement a statewide, comprehensive worksite wellness recognition program that at least 10 very small-, 15 small-, 10 medium-, and 5 large-employers will participate in.

STRATEGIES

- Identify stakeholders and convene an advisory group to develop a Hawai'i-specific, evidence-based worksite wellness recognition program that includes the following areas:
 - Asthma
 - Cancer
 - Diabetes
 - Heart Disease and Stroke
 - Physical Activity and Nutrition
 - Tobacco
- Pilot the recognition program with a group of diverse employers and modify the program based on their feedback.

BASELINE:

very small = 0
small = 0

medium = 0
large = 0

TARGET:

very small = 10
small = 15

medium = 10
large = 5



IMPLEMENTATION

The rapidly increasing prevalence of chronic diseases and their associated risk factors in Hawai'i demands effective coordination of chronic disease prevention and management efforts. Statewide collaboration between stakeholders and partners reduces duplication of efforts and leverages resources to effectively address common risk factors through evidence-based policies, programs, and services. Stakeholders are convened regularly to discuss progress towards achieving the Heart Disease and Stroke objectives and strategies in the *Healthy Hawai'i Strategic Plan 2030 (HHSP)* and to monitor and evaluate progress. The stakeholder group will continue to expand membership to include new, community representatives and to assure an inclusive, and community-based participatory approach. For a comprehensive overview of the common plan framework and statewide goals to prevent and manage heart disease and stroke and other chronic diseases, please refer to the HHSP at www.HHSP.hawaii.gov.

LONG-TERM MEASURES

The long-term measures were identified to summarize and evaluate progress toward achieving the HDSP 2030 objectives. The long-term measures will be monitored throughout the decade to demonstrate improvements in heart disease and stroke prevention and control. Long-term measures will be reviewed and updated periodically as changes are made to the HDSP 2030.

LONG-TERM MEASURE	BASELINE	TARGET
Coronary heart disease death rate	66.0 per 100,000 (CDC Interactive Atlas of Heart Disease and Stroke, 2016-2018)	58.1 per 100,000
Stroke death rate	36.0 per 100,000 (CDC Interactive Atlas of Heart Disease and Stroke, 2016-2018)	33.4 per 100,000
Adults (with high blood pressure) who report taking medications for high blood pressure	75.0% (BRFSS, 2017)	84.8%
Adults with hypertension with controlled blood pressure	63.1% (UDS, 2019)	70%
Adults at risk for cardiovascular events prescribed statin therapy (age 21 years and older)	68.7% (UDS, 2019)	76.3%



PARTNERS

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- » Joseph Humphry, MD, Internal Medicine Physician
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- » Christina Simmons, YMCA of Honolulu
- » Cristina Vocalan, Hawai'i Primary Care Association
- » Don Weisman, American Heart Association
- » Brian Wu, MD, Hawaii Medical Service Association

Statewide collaboration between stakeholders and partners reduces duplication of efforts and leverages resources to effectively address common risk factors through evidence-based policies, programs, and services.

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- Healthy Hawai'i Strategic Plan 2030
- Hawai'i Diabetes Plan 2030
- Hawai'i Asthma Plan 2030
- Hawai'i Physical Activity and Nutrition Plan 2030
- Hawai'i Cancer Plan 2030
- Hawai'i Tobacco Prevention and Control Plan 2030





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The HDSP 2030 can be accessed, downloaded, and interacted with
at the following website: www.HHSP.hawaii.gov

Non Discrimination in Services

We provide access to our programs and activities without regard to race, color, national origin, language, age, sex, religion, or disability. Write or call the Chronic Disease Prevention and Health Promotion Division or our Affirmative Action Officer at P.O. Box 3378, Honolulu Hawai'i 96801-3378 or (808) 586-4110 (voice/TTY) within 180 days of a discrimination incident.