

Chronic Disease

Asthma, Cancer, Diabetes, Heart Disease & Stroke

Healthy Hawai'i 2020
A Community Health Plan

Asthma

Asthma is one of the most common chronic diseases among Hawaii's children, causing attacks of wheezing, breathlessness, chest tightness, and coughing. Approximately 16.0 percent of Hawaii children and 9.2 percent of Hawaii adults currently have asthma¹. Asthma symptoms are often triggered by exposure to inhaled allergens (e.g., dust, pollen, tobacco smoke, pollution, vog, animal dander) or by exertion and stress. Asthma attacks may also require hospitalization, resulting in increased medical costs and missed school or work. In 2013, asthma-related hospitalization costs in Hawaii totaled \$30.2 million².

Indicators

- Reduce the rate of hospitalizations for asthma among young children (<5 years).
 - 2012 Baseline³: 19.7 per 10,000
 - Hawaii 2020 target: 18.1 per 10,000
 - HP 2020 target: 18.2 per 10,000
- Reduce the rate of hospitalizations for asthma among children and adults (5-64 years).
 - 2012 Baseline³: 5.8 per 10,000
 - Hawaii 2020 target: 5.1 per 10,000
 - HP 2020 target: 8.7 per 10,000
- Reduce the rate of hospitalizations for asthma among adults (65+ years).
 - 2012 Baseline³: 18.7 per 10,000
 - Hawaii 2020 target: 15.5 per 10,000
 - HP 2020 target: 20.1 per 10,000

Strategies^{2,4}

- Promote chronic disease self-management programs and enhance educational resources to empower patients, caregivers, and communities to help those with asthma become more effective at managing their condition.
 - Support development and implementation of asthma-friendly schools.
 - Encourage parents to prepare an Asthma Action Plan in conjunction with their child's pediatrician.
 - Provide tools, training, and information, including lay educator training, group education, and tobacco cessation services.
 - Engage patients, caregivers, schools, housing, and other community partners to plan and implement prevention policies and sustain reach of evidence-based asthma control services.
- Improve access and quality of asthma healthcare delivery.
 - Implement quality improvement processes in health care systems.
 - Promote use of team-based care to improve coordination and use of culturally- appropriate asthma care.
 - Enhance patient linkages to guidelines-based asthma care.
 - Promote coverage/reimbursement for comprehensive asthma control services.
- Implement policies and initiatives that promote healthy environments, improve indoor/outdoor air quality, and expand access to safe and healthy housing and worksites.

Cancer

Each year, more than 6,000 Hawai'i residents are diagnosed with cancer and more than 2,000 die from the disease^{1,5,6}. While Hawai'i's citizens boast the longest life span of any state in the nation, the number of those impacted by cancer will grow as our population ages in the years ahead. Cancer can be caused by external (chemicals, radiation, viruses), internal (hormones, immune conditions, genetics), and lifestyle (tobacco, alcohol use, unprotected sun exposure, poor nutrition, physical inactivity) factors. In Hawaii, the five most common cancers diagnosed among men are prostate, lung, colorectal, melanoma, and bladder. Among women, the most common cancers are breast, lung, colorectal, uterine, and thyroid⁵. Significant disparities exist as well. Cancer-related health care spending in our state reaches upward of \$500 million annually⁶.

Indicators

- Increase the proportion of adults (50-75 years) receiving colorectal cancer screenings.
 - 2014 Baseline¹: 66.5%
 - Hawaii 2020 target: 70.5%
 - HP 2020 target: 70.5%
- Increase the proportion of women (21-65 years) receiving a cervical cancer screening.
 - 2014 Baseline¹: 76.8%
 - Hawaii 2020 target: 93.0%
 - HP 2020 target: 93.0%
- Increase the proportion of women (50-74 years) receiving a breast cancer screening.
 - 2014 Baseline¹: 83.7%
 - Hawaii 2020 target: 88.7%
 - HP 2020 target: 81.1%
- Reduce the overall death rate from cancer.
 - 2014 Baseline⁷: 136.1 per 100,000
 - Hawaii 2020 target: 127.9 per 100,000
 - HP 2020 target: 161.4 per 100,000

Strategies^{4,5}

- Promote screening and early detection according to the U.S. Preventive Services Task Force recommendations.
- Establish policy, systems, and environmental changes for the prevention and early detection of cancer, timely and affordable cancer care, and support for survivors and their families.
- Increase public and professional awareness about cancer-related health inequities. Engage and provide outreach and education to minority populations on cancer risk, community screening services, and other resources to overcome barriers to screening and follow-up.
- Increase immunization coverage for vaccine-preventable cancers such as those caused by the Human Papillomavirus (HPV) and Hepatitis B Virus (HBV) through coordination with community and health system providers to enhance health services and public education.

Diabetes

Diabetes is one of the most serious, common, and costly diseases in Hawaii and across the United States. In 2014, 108,400 (9.7%) adults in Hawaii said they were diagnosed with diabetes. An additional 160,200 (14.4%) adults were diagnosed with prediabetes and are at high risk of developing diabetes in the future¹. Diabetes lowers life expectancy by up to 15 years and is the leading cause of end-stage renal disease, non-traumatic lower-extremity amputation, and blindness among working age adults⁸. Persons with diabetes are also at increased risk for ischemic heart disease, neuropathy, stroke, and premature death. Early detection and treatment, ongoing self-management, and improved delivery of care are critical to preventing and reducing the burden of this disease. In addition to the human costs, the estimated total economic burden of diabetes is extraordinary, with direct medical expenditures averaging nearly 2.4 times that of persons without diabetes⁸.

Indicators

- Increase the proportion of adults (45+ years) in Hawaii without diabetes who received a blood sugar test in the last three years.
 - 2014 Baseline¹: 59.7%
 - Hawaii 2020 target: 63.3%
 - HP 2020 target: --
- Increase the proportion of adults (18+ years) with diabetes who have a glycosylated hemoglobin measurement at least twice a year.
 - 2013 Baseline¹: 67.7%
 - Hawaii 2020 target: 71.1%
 - HP 2020 target: 71.1%

Indicators (cont.)

- Reduce the proportion of adults (18+ years) in Hawaii with uncontrolled diabetes (hemoglobin A1c level, or Hba1c, greater than 9%).
 - 2015 Baseline⁹: To be determined
 - Hawaii 2020 target: To be determined
 - HP 2020 target: 16.1%

Strategies^{4,8}

- Improve access and quality of pre-diabetes healthcare delivery.
 - Implement quality improvement processes for diabetes screening and testing in health care systems.
 - Establish standardized care across health systems. Increase institutionalization and monitoring of standardized diabetes quality measures at the provider and system level.
 - Expand professional development opportunities in pre-/diabetes management, lifestyle modification and behavior change, and client empowerment.
- Improve community-clinical linkages to support pre-/diabetes prevention efforts.
 - Engage community health centers and providers to facilitate bi-directional referrals between health systems and community resources.
 - Engage network partners to build capacity and garner support for coverage/reimbursement of CDC recognized lifestyle change programs.
- Increase the number of culturally appropriate pre-/diabetes prevention and self-management education programs and provide technical assistance to community agencies to develop and strengthen programs that focus on disparate populations.

Heart Disease & Stroke

Cardiovascular disease (CVD) is among the leading causes of death and serious long-term disability in Hawaii. The two most common and deadly forms of CVD include coronary heart disease (CHD) and stroke, which account for the first and third leading causes of death, respectively. In 2014, 37,800 (3.4%) Hawaii adults were diagnosed with CHD, and 34,200 (3.1%) had a stroke¹. Distinct socioeconomic, geographic, and ethnic health disparities also exist. CVD risk may be lowered through lifestyle changes including eating a heart-healthy diet, limiting alcohol, avoiding tobacco, controlling one’s weight, staying physically active, and controlling one’s blood pressure and cholesterol levels. The burden on the health care system to treat CVD is significant, with over 18,000 hospitalizations every year in Hawaii¹⁰. These hospital stays are expensive, with CVD accounting for about 22 percent of all Hawaii hospital costs.

Indicators

- Increase the proportion of adults (18+ years) with hypertension who have their blood pressure under control (<140/90 mm Hg).
 - 2015 Baseline⁹: To be determined
 - Hawaii 2020 target: To be determined
 - HP 2020 target: 61.2%
- Reduce the death rate for coronary heart disease.
 - 2014 Baseline⁷: 72.8 per 100,000
 - Hawaii 2020 target: 68.4 per 100,000
 - HP 2020 target: 103.4 per 100,000
- Reduce the death rate for stroke.
 - 2014 Baseline⁷: 33.7 per 100,000
 - Hawaii 2020 target: 31.7 per 100,000
 - HP 2020 target: 34.8 per 100,000

Strategies^{4,10}

- Improve access and quality of CVD healthcare delivery.
 - Implement quality improvement processes in health care systems associated with CVD diagnosis, management, and treatment.
 - Increase institutionalization and monitoring of standardized CVD quality measures at the provider and system level.
 - Promote use of team-based care in provision of medication/hypertension management for adults with high blood pressure by engaging non-physician team members (e.g., nurses, pharmacists, community health workers).
 - Implement systems to identify patients with undiagnosed hypertension.
 - Increase the use of self-measured blood pressure monitoring tied with clinical supports.
- Improve community-clinical linkages to support CVD prevention efforts.
 - Coordinate efforts with physician networks, providers, and other partners to build capacity and coverage/reimbursement for lifestyle change programs.
 - Promote use of self-monitoring blood pressure management practices and other evidence-based interventions for CVD within health systems.

Citations and further resources

- ¹[Behavior Risk Factor Surveillance System \(BRFSS\)](#)
- ²[Hawaii Asthma Plan, 2011-2016](#)
- ³[Hawaii Health Matters - Asthma Tracker, Hawaii Health Information Corporation \(HHIC\)](#)
- ⁴[Hawaii Coordinated Chronic Disease Framework, 2014-2020](#)
- ⁵[Hawaii State Cancer Plan, 2016-2020](#)
- ⁶[Hawaii State Department of Health, CDPHPD - Cancer Program](#)
- ⁷[Hawaii State Department of Health, Vital Statistics](#)
- ⁸[Hawaii State Department of Health, CDPHPD - Diabetes Program](#)
- ⁹Uniform Data System (UDS)
- ¹⁰[Hawaii State Plan for Prevention of Heart Disease & Stroke, 2011-2016](#)