MASSACHUSETTS

STATE CANCER PLAN

2024–2029

MASSACHUSETTS
Comprehensive Cancer Coalition

Table of Contents

Acknowledgments 3

Letter from the Commissioner of the Massachusetts Department of Public Health 7

About this Plan 9

Health Equity Framework 12

About the Massachusetts Comprehensive Cancer Coalition 17

Development of the Plan 21

Cancer Burden in Massachusetts 24

The State Cancer Plan 37

→ Goals, Objectives, and Recommended Strategies

From Planning to Action 72

Evaluation of the Plan 74

Appendices 91

→ Appendix A: Glossary of Terms

→ Appendix B: References

01

Acknowledgments

The MA Comprehensive Cancer Coalition would like to acknowledge the contributions of the following people and partners in the strategic planning process that led to the creation of this Plan:

Primary Prevention

Milagros Abreu, MD, MPH
The Latino Health Insurance Program, Inc.

Caroline Cranos, MPH, NTCCP
UMass Chan Medical School

Eileen Duffey-Lind, RN, MSN, CPNP
Dana-Farber Cancer Institute

Maria Evora, MSW
MA Department of Public Health

Brenda Netreba, MA
MA Department of Public Health

Rajani Sadasivam, PhD
UMass Chan Medical School

Kara Showers, MPH, CHES
City of Melrose

Risa Silverman, MPH
University of Massachusetts Amherst

Melanie Steeves, MPH
MA Department of Public Health

Secondary Prevention

Maria Alaniz, MPH
University of California Davis

Andrea Borondy-Kitts, MS, MPH
Rescue Lung Society

Sarah Feldman, MD, MPH
Harvard Medical School,
Brigham And Women’s Hospital

Mark Kennedy, MBA
Boston Public Health Commission

Stewart Landers, JD
John Snow, Inc.

Thuha Le, MA
MA Department of Public Health

Rachel Levine, MS
Dana-Farber Cancer Institute

Kerri Medeiros, MPA
American Cancer Society, Inc.

Rebecca Perkins, MD, MSc
Tufts University School of Medicine

Timothy Rebbeck, PhD
Harvard T.H. Chan School of Public Health,
Dana-Farber Cancer Institute

Shawn Regis, PhD
Beth Israel Lahey Hospital & Medical Center

Leslie Salas-Karnes, MPH
Massachusetts League of Community
Health Centers

Secondary Prevention (cont.)

Katrina Ann Steiling, MS, MD
Boston University School of Medicine

Elizabeth Valett
American Cancer Society, Inc.

Elizabeth Wilson
Beth Israel Lahey Health

Diagnosis and Treatment

Leslie Agyemfra, CHW
Dana-Farber/Harvard Cancer Center

Anita Christie, RN, MHA, CPHQ
Community Member

Jonathan Gerber, MD
NYU Langone Health

Sheila Murphy, DNP, RN-BC, PCCN
Boston Medical Center

Erica Warner, MPH, ScD
Mass General Research Institute,
Harvard Medical School

Survivorship

Jessica Beckstrand
American Childhood Cancer Organization

Erica Bernstein, MD, PhD
Dana-Farber Cancer Institute

Karen Burns White, MS
Dana-Farber/Harvard Cancer Center

Cherece Burston, CHW
Caring Health Center

Nekia Clark
Ellie Fund

Debbie DiStefano, PhD
Hilltown Community Health Centers, Inc.

Jamie Faro, PhD
UMass Chan Medical School

Kelly Irwin, MD, MPH
Massachusetts General Hospital

Dawn LaPierre, MBA
YMCA of Greater Springfield

Carisa Lozoraitis, RN, MSN, CPHQ
UMass Memorial Medical Center

Larissa Nekhlyudov, MD, MPH
Brigham & Women’s Hospital; Dana-Farber
Cancer Institute, Harvard Medical School

Memnun Seven, PhD, RN
UMass Amherst

Caitlyn Sweeney
Alliance of Massachusetts YMCAs

Shioban Torres, DrPH, MPH
MA Department of Public Health

Fang Fang Zhang, MD, PhD
Tufts University

Palliative Care

Karen Bullock, PhD, LICSW, FGSA, APHSW-C
Boston College

Joanne Calista, MS
Center for Health Impact

Stephanie Chan, MPH
Massachusetts Coalition for Serious Illness Care

Connie Dahlin, MSN, ANP-BC, ACHPN, FPCN, FAAN
Center to Advance Palliative Care, University of Maryland, Baltimore, North Shore Medical Center

Ellen DiPaola, JD
Honoring Choices Massachusetts

Christine McMichael, MA
Hospice & Palliative Care Federation of MA

Emily Palmer, NP, MSN
Beth Israel Lahey Health

Regine Thevenin, MPH
MA Department of Public Health

Laura Vanderhill, LSW, MHA
Healthcentric Advisors

MA Department of Public Health Contributors

Bureau of Community Health and Prevention

→ Cancer Initiatives Unit

→ Mass in Motion Municipal Wellness & Leadership Initiative

→ Office of Oral Health

→ State Office of Rural Health

→ Office of Statistics and Evaluation

→ Massachusetts Tobacco Cessation and Prevention Program

→ Office of Community Health Workers

Bureau of Infectious Disease and Laboratory Science

→ Immunization Division

Bureau of Climate and Environmental Health

Bureau of Substance Addiction Services

Office of the Assistant Commissioner for Health Equity

→ Office of Health Equity and Engagement

Office of Population Health

→ Massachusetts Cancer Registry

02

Letter from the Commissioner

Letter from the Commissioner of the Massachusetts Department of Public Health

Dear Colleague,

Cancer is a devastating illness that impacts tens of thousands of individuals and families across Massachusetts each year. It remains the leading cause of death in the Commonwealth for older adults, particularly those 45 to 84. While cancer encompasses many different diseases, breast, lung, prostate, and colorectal cancer account for the majority of new cases each year. Between 2016 and 2020, Massachusetts saw an average of 39,820 new cancer cases diagnosed per year, and an average number of 12,646 deaths caused by cancer each year (MA Cancer Registry).

The Massachusetts Comprehensive Cancer Coalition, a diverse and dedicated group of partners across Massachusetts, developed the Massachusetts 2024 - 2029 State Cancer Plan. The Massachusetts Department of Public Health (DPH) is one such partner leading initiatives aimed at preventing cancer, finding it early, and improving the lives of those living with cancer. The Coalition made deliberate efforts to include the voices of those with lived and living experience — cancer survivors and their families or caregivers, advocates, and community members. We are so grateful for their contributions which both improved and grounded the Plan.

The Massachusetts State Cancer Plan outlines a comprehensive approach to cancer prevention, early detection, treatment, survivorship, and palliative care. It is driven by data and lays out clear goals, objectives, and strategies for addressing priority areas and the persistent disparities we see across the cancer care continuum in Massachusetts. By design, the Plan's framework is built around health equity, leading with racial equity. Coalition members also sought to include strategies that focus on changing policies, systems, and environments — strategies that will have sustainable, long-term impacts.

As a partner in the Coalition, DPH plays a key role in implementing the State Cancer Plan and will collaborate to carry out the strategies outlined in the Plan for prevention, early detection, treatment, survivorship, and palliative care. Additionally, DPH will share data to help the Coalition identify cancer disparities, track cancer trends, and measure the Plan's impact. We will also share resources and provide content expertise to support the Coalition's activities. Through collaboration, DPH can help drive meaningful progress in improving cancer outcomes.

We need your help to reduce the burden of cancer on Massachusetts residents, their families, and their communities. To support this comprehensive plan, there are many things you can do in your own personal life or in your organization. I encourage you to read the Plan to see how you can contribute to its success

Sincerely,

Robbie Goldstein, MD, PhD
Commissioner
Massachusetts Department of Public Health

03

About This Plan

A comprehensive approach to cancer prevention, early detection, treatment, survivorship, and palliative care.

About the Massachusetts State Cancer Plan

The Massachusetts 2024-2029 State Cancer Plan (Cancer Plan or Plan) is a roadmap for reducing the burden of cancer in the state. The Plan outlines a comprehensive approach to cancer prevention, early detection, treatment, survivorship, and palliative care. It is designed as a guide for statewide, local, and community efforts to reduce the incidence and mortality of cancer and address persistent disparities across the cancer continuum.

It is intended to generate partnerships, leverage resources, and focus efforts on improving cancer outcomes for all residents of Massachusetts, while prioritizing population groups that experience the greatest disparities in cancer.

The Cancer Plan is developed and implemented by the Massachusetts Comprehensive Cancer Coalition (MCCC or Coalition). The MCCC is comprised of a diverse group of partners, including representatives from clinical care settings, community-based organizations, public health organizations, government organizations, academic research centers, cancer survivors and their caregivers, and advocates, that work together to achieve the Plan's goals and objectives.

There are five priority areas for the Plan and they correlate to the five stages of the cancer continuum: Primary Prevention, Secondary Prevention, Treatment and Diagnosis, Survivorship, and Palliative Care. Over 69 Coalition members developed 16 objectives and 122 strategies related to these five priority areas. Objectives were developed to include measures that will be supported by data, and progress on these objectives will be monitored throughout the Plan's implementation. The Plan seeks to advance strategies that stop cancer before it starts, help people to find cancer early through screening, and support those who have been diagnosed with cancer through their treatment and beyond.

The foundational framework of the Plan is a health equity framework reflecting a deep commitment to addressing the social determinants of health and root causes of disparities in cancer outcomes. In developing the Plan, populations that experience significant inequities and face greater barriers to cancer prevention, detection, treatment, and survival were prioritized. Those populations include people of color (e.g., Black, Hispanic/Latine, and Asian/Pacific Islander), LGBTQ+ persons, persons with disabilities, and rural populations.

Another organizing principle of the Plan is to affect change in communities through a Policy, Systems, and Environmental (PSE) approach. By implementing strategies that are PSE-focused, the Plan acknowledges how the policies, systems, and environments where we live, learn, work, worship, and play shape our health. The Plan offers implementation strategies for government, health care networks and many other partners. It is through collective action that we can reduce the burden of cancer and achieve health equity in cancer outcomes.

What is cancer?

Cancer refers to diseases in which abnormal cells divide out of control and are able to invade other tissues. There are more than 100 different types of cancer and most cancers are named for the organ or type of cell in which they start.[1] Although the detection and treatment of cancer has greatly advanced over time, cancer remains the leading cause of death for adults in Massachusetts.

04

Leading with Race & Racism

As cancer burden is examined across Massachusetts, inequities persist among population groups at each stage of the cancer continuum. These differences cannot be attributed to individual behaviors, but rather bring to light inequities in opportunities to prevent, detect, treat, and survive cancer. Achieving health equity for all people means providing everyone with opportunities to achieve their best health. Major barriers to health equity stem from the social determinants of health (SDoH) — the conditions in the environments where people are born, live, learn, work, play, worship, and age. The social determinants of health include conditions of housing, education, employment, environmental exposure, health care, public safety, food access, income, and social services. Rather than addressing the negative outcomes of poor conditions, it is essential to address the causes at the root, to change the systems and structures that lead to the poor conditions. As the following graphic shows, negative health outcomes grow from underlying systems rooted in dominant culture and narratives, which can shape the environment and limit opportunities to engage in healthy behaviors.

Drivers of Health Inequities

Social Determinants of Health (SDoH) are the biggest drivers of health inequities. They are the conditions in the environments where people are born, live, learn, work, play, worship, and age affecting a wide range of health, functioning, and quality of life outcomes and risks, including cancer and the risk factors associated with developing cancer.

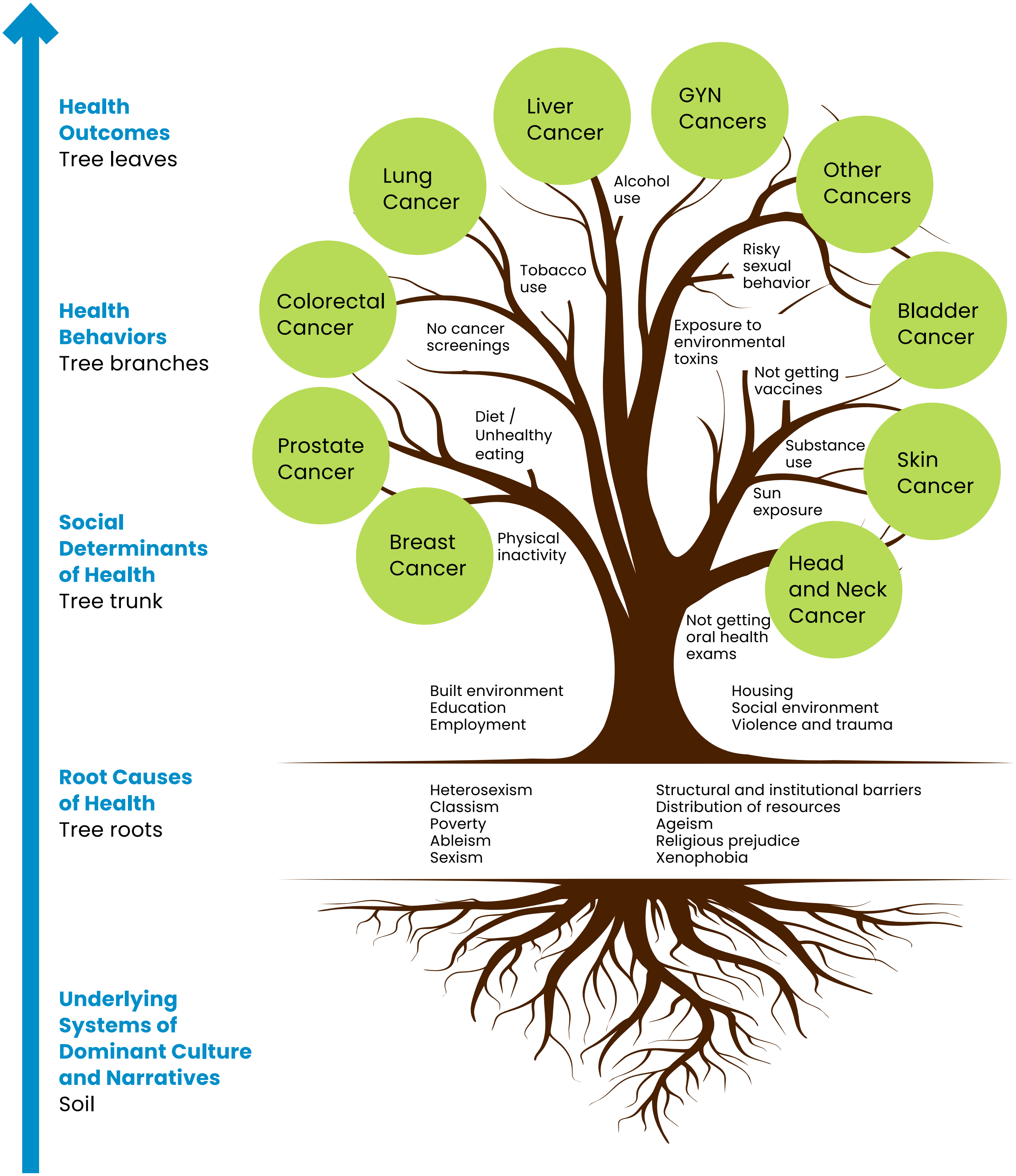


FIGURE 1. HEALTH TREE AND ROOT CAUSES OF CANCER [2]

In the United States and across the Commonwealth, systemic and structural racism have prevented people from being able to achieve their best health and are root causes of many disparities we see in cancer outcomes. Structural racism, which is evident in public policies, institutional practices, and social norms, has included historic and ongoing policies of racial segregation and disinvestment in communities of color. And this has led to significant health inequities. Examples of such policies in Massachusetts include the practices of discriminatory industrial zoning, redlining, unfair hiring practices, and mass incarceration.[3] These policies have resulted in communities of color that are burdened by increased exposures to cancer risk factors, neighborhoods where it is not safe to exercise outside and is difficult to buy healthy food, and that have limited or no access to quality health care services.

Acknowledging that these inequities in cancer outcomes are driven by structural racism and social determinants of health, the Massachusetts State Cancer Plan seeks to address these inequities through a framework of leading with race and racism explicitly, but not exclusively. By leading with race and racism, we are acknowledging that the systems failing our residents of color and putting them at increased risk of cancer are failing all residents. Working on these inequities will improve the health of Massachusetts as a whole.[4]

What are Comprehensive Cancer Control Plans?

The Centers for Disease Control and Prevention (CDC) describe comprehensive cancer control plans as identifying how “an organization or coalition addresses the burden of cancer in its geographic area.”[5] The CDC established the National Cancer Prevention and Control Program in 1998 to help states, tribes, and territories form coalitions to plan and conduct comprehensive cancer control activities. The Massachusetts Department of Public Health (DPH) has received funding for the Massachusetts Comprehensive Cancer Control Program (MCCCP) from the CDC since 1998. The MCCCP convenes the MA Comprehensive Cancer Coalition and serves as one of many partners in developing and implementing the State Cancer Plan. The State Cancer Plan is a collective effort of the Coalition, with the MCCCP coordinating the writing of this Plan.

Ableism, classism, heterosexism, sexism, transphobia, and other forms of bias also result in inequities and create disparities in cancer outcomes. For example, the Cancer Burden section of this Cancer Plan describes how people with disabilities, people of color, rural populations, and LGBTQ+ communities face barriers to health that other communities may not experience. Each person has many aspects to their identity and can face multiple biases. When social biases intersect, inequities can be compounded and amplified.

This framework of leading with race and racism explicitly, but not exclusively, is at the core of the Coalition's work. From Coalition member recruitment, through data collection, and the prioritization of goals, objectives, and strategies, health equity is the central theme of this Cancer Plan.

05

About the Massachusetts Comprehensive Cancer Coalition

The Massachusetts Comprehensive Cancer Coalition (MCCC or Coalition) is a statewide coalition of individuals and organizations (e.g., patients/survivors/caregivers, clinical care providers, community organizations, government organizations, cancer centers, community health centers, academic partners) working together to develop, implement, and evaluate the Cancer Plan. Coalition members may have experience and expertise in one form of cancer or many. The Coalition is organized along the stages of the cancer continuum, with explicit focus on health equity and working toward the Coalition's Vision and Mission.

MCCC's Vision & Mission

Vision:
To significantly reduce the burden of cancer for all residents of Massachusetts.

Mission:
To develop partnerships that address the disparities across the cancer continuum and improve the lives of cancer survivors and those living with cancer.

To achieve this mission, MCCC has and will work to:

- → Identify and eliminate barriers to health equity in order to close persistent gaps in cancer outcomes
- → Prioritize the unmet needs of disproportionately affected communities through advocacy, multisectoral partnerships, and ensuring equitable access to quality resources
- → Implement and promote the Massachusetts State Cancer Plan

The following graphic depicts the organizational structure of the Coalition:

MASSACHUSETTS
Comprehensive Cancer Coalition

Coalition Coordinator
Coordinates and supports the activities of the Coalition.

Regional Champions
Represent the cancer needs and opportunities of their region within the Coalition.

Health Equity Committees
Work to advance health equity across the five areas of the cancer care continuum.

Leadership Group
Sets and drives the direction of the Coalition.

General Members
Individuals and organizations engaged in planning and implementing Coalition activities.

Coalition Coordinator — The Coalition Coordinator coordinates and supports the activities of the Coalition.

Regional Champions — There are six Regional Champions that represent each of the six regions of the state: Boston; Western Massachusetts; Central Massachusetts; Metro West; the Northeast; and the Southeast, Cape, and Islands. This role provides an opportunity for people who live and work in a particular region of the state to provide input and regional perspective on the development of this Plan and its implementation. Regional Champions participate in the Health Equity Committees based on their area of expertise.

Health Equity Committees — The Health Equity Committees (HECs) are organized by the five stages of the cancer continuum: Primary Prevention, Secondary Prevention, Diagnosis and Treatment, Survivorship, and Palliative Care. These Health Equity Committees meet quarterly and work collectively to advance health equity in cancer. The five HECs ensure that health and racial equity are integrated into all aspects of the committee’s work, including the implementation of this Plan. HECs engage communities and partners by connecting with regions on location-specific initiatives and resources to carry out the work. The HECs have done this by creating objectives and strategies that seek to eliminate significant health disparities, address social determinants of health, break down barriers to accessing care, and elevate community-based strengths and solutions.

Leadership Group — The Leadership Group sets the strategic direction of the Coalition and oversees the ongoing work of the members to fulfill the MCCC's vision and mission. The Leadership Group is comprised of the Co-Chairs of each of the five Health Equity Committees and the six Regional Champions. The Leadership Group is co-chaired by a member appointed by the Leadership Group and the Director of the Comprehensive Cancer Control Program at DPH.

General Members — General Members are individuals and organizations engaged in planning and implementing Coalition activities.

06

Development of the Plan

Development of the Plan

The MCCC engaged in a strategic planning process between Fall 2022 and Winter 2023 to develop this Cancer Plan. The following timeline graphic outlines the steps in that process. Coalition partner participation helped to align the Cancer Plan goals, objectives, and strategies with other priorities and activities impacting cancer outcomes across the state.

Fall 2022

Coalition work on Plan began

- Coalition launched and planning process initiated

Winter 2022 – Spring 2023

MCCC gathered qualitative and quantitative data to include:

- Environmental scan
- Community level focus groups
- Key informant interviews with regional partners
- Cancer incidence and mortality data, data related to the stages of the cancer continuum, and data related to priority populations

Spring – Summer 2023

The MCCC reviewed findings from data gathering efforts, held virtual planning sessions to prioritize goals and objectives, and drafted the Plan with a focus on data, equity, and root causes of disparities.

Fall 2023 – Summer 2024

The Cancer Plan draft goals, objectives, measures, and strategies were reviewed and the Cancer Plan was written.

Development of the Plan (cont.)

Implications of the COVID-19 Pandemic

One consideration about the Plan is the time periods reflected in the quantitative incidence and mortality data. Most of the data from the Cancer Incidence and Mortality Statewide Report reflects time periods ending prior to, or in the first year of the COVID-19 pandemic (2016-2020). The Plan, therefore, largely reflects natural trends in incidence and mortality prior to the disruption of the pandemic. At the height of the Covid-19 pandemic, researchers found increases in cancer risk behaviors, disruptions in clinical trials, and loss of in-person supports. They also saw delays in screening, immunizations that can prevent cancer, and treatment. In response, the medical community worked and is still working aggressively to make up for the effects of the pandemic.[6] Over time, as data becomes available, the consequences of the pandemic on cancer burden in the state will become more evident.

Cross-Cutting Themes: Health Equity, Access to Care & Support Services

In MCCC's review of data from key informant interviews, focus groups, and statewide cancer burden data, some clear themes arose shaping the content and direction of the Plan. As participants offered feedback related to strengths, challenges, and opportunities in the state, equity and access concerns were elevated across priority areas. A literature review of other state cancer plans, research studies, and health equity tools also pointed to the need to keep access to community-based and culturally tailored care and services, and social determinants of health and their root causes, at the forefront of MCCC's planning process.

07

Cancer Burden in Massachusetts

Cancer Incidence & Mortality[7]

Cancer incidence is the number of new cancer cases diagnosed in a year. Although the overall cancer incidence rate decreased non-significantly in Massachusetts between 2016 and 2020, there is still an average of 39,820 new cancer cases diagnosed each year. The age-adjusted incidence rate for all cancers combined in Massachusetts for men was 491.3 cases per 100,000 during this period and 433.9 cases per 100,000 for women.

On average, there were 12,646 cancer deaths each year in Massachusetts between 2016 and 2020, and the number of cancer deaths was higher among men than among women. The age-adjusted mortality rate for all cancers combined in the state was 174.0 deaths per 100,000 for men and 124.0 deaths per 100,000 for women.

Cancer deaths overall decreased in Massachusetts during this time, and the Massachusetts age-adjusted cancer mortality rates were significantly lower than national rates for both males and females.

Data Limitations Related to Identity

The Massachusetts Comprehensive Cancer Coalition recognizes the limitations of how cancer data is collected and categorized for race, ethnicity, gender, sexual orientation, and other aspects of identity, both at the state and federal level. While grouping data is useful and necessary for data analysis and identifying and eliminating health inequities, historical groupings are often found to be inadequate and in conflict with how individuals may self-identify. In this Plan, the terms male and female refer to sex assigned at birth, and race and ethnicity classifications are based on Federal reporting standards. Expanding and evolving data collection and classification efforts throughout health and government systems is critical to advancing equity for all.

Leading Cancers in Massachusetts

According to the American Cancer Society, cancer is not just one disease. There are more than 100 types of cancers, which can start almost anywhere in the body. Different cancers are caused by different risk factors and can grow or spread in different ways. These four cancers are the most common and cause the greatest number of cancer deaths in Massachusetts: lung cancer, breast cancer, prostate cancer, and colorectal cancer.

Among females, breast cancer was the most commonly diagnosed cancer from 2016 to 2020, representing almost one-third of all new cancer cases in females. Prostate cancer was the leading cancer among males, accounting for one-quarter of new cancer cases in males from 2016 to 2020. The top cause of cancer deaths overall in Massachusetts between 2016 and 2020 was lung cancer.

Figure 2.1. Massachusetts Cancer Incidence Among Females

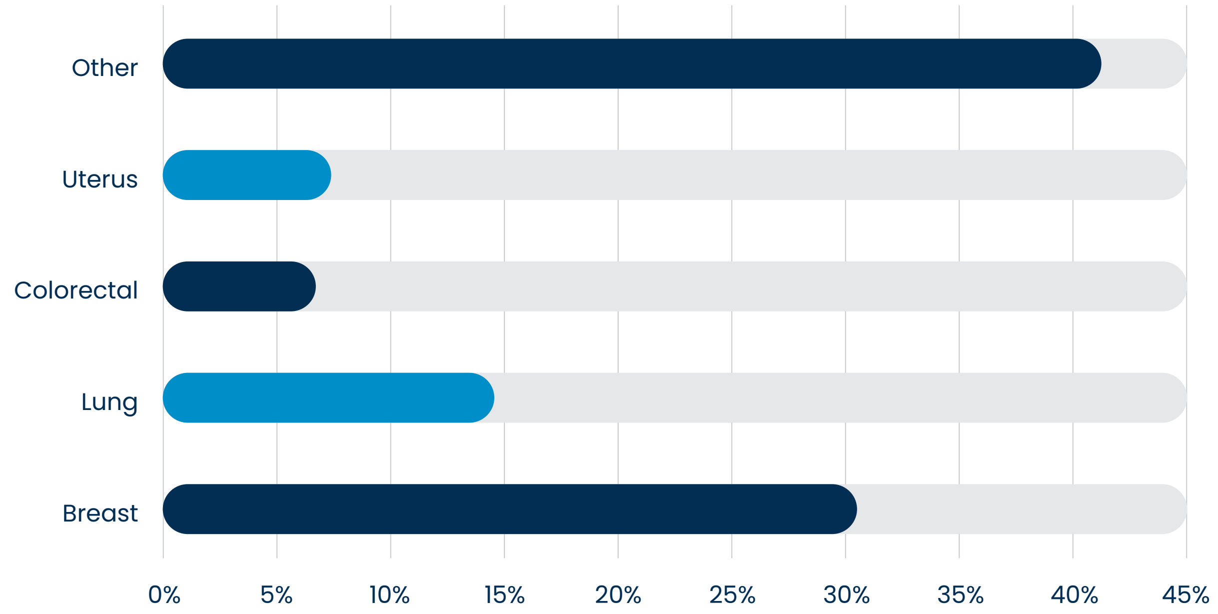


Figure 2.2. Massachusetts Cancer Incidence Among Males

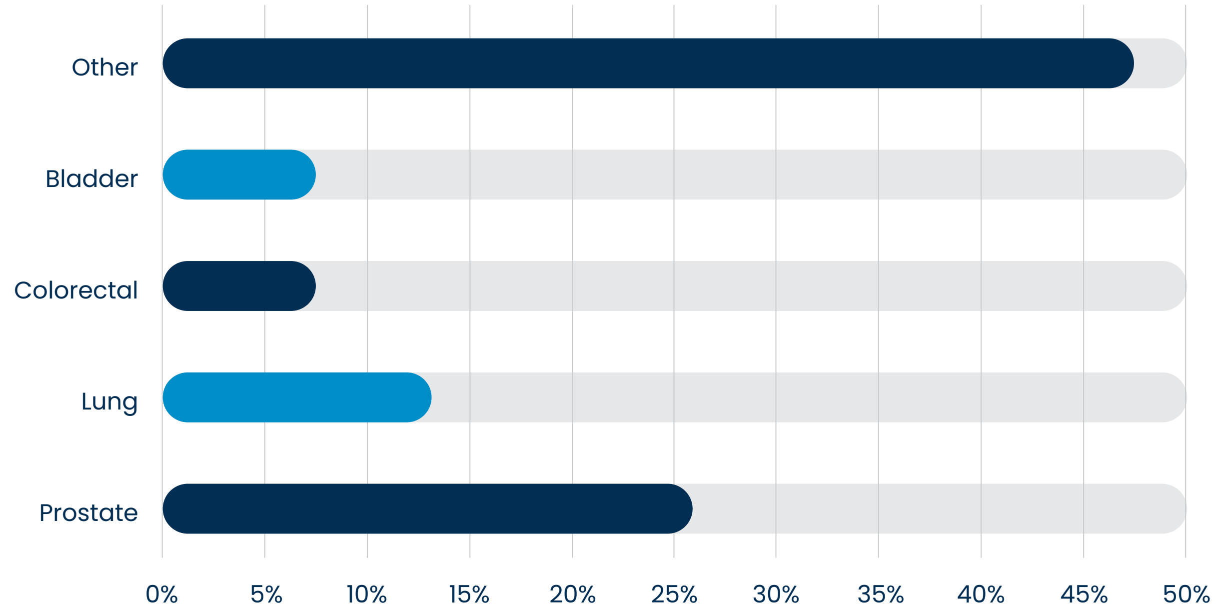


FIGURE 2. LEADING CANCER INCIDENCE AND MORTALITY BY SEX, 2016-2020

Figure 2.3. Massachusetts Cancer Mortality Among Males

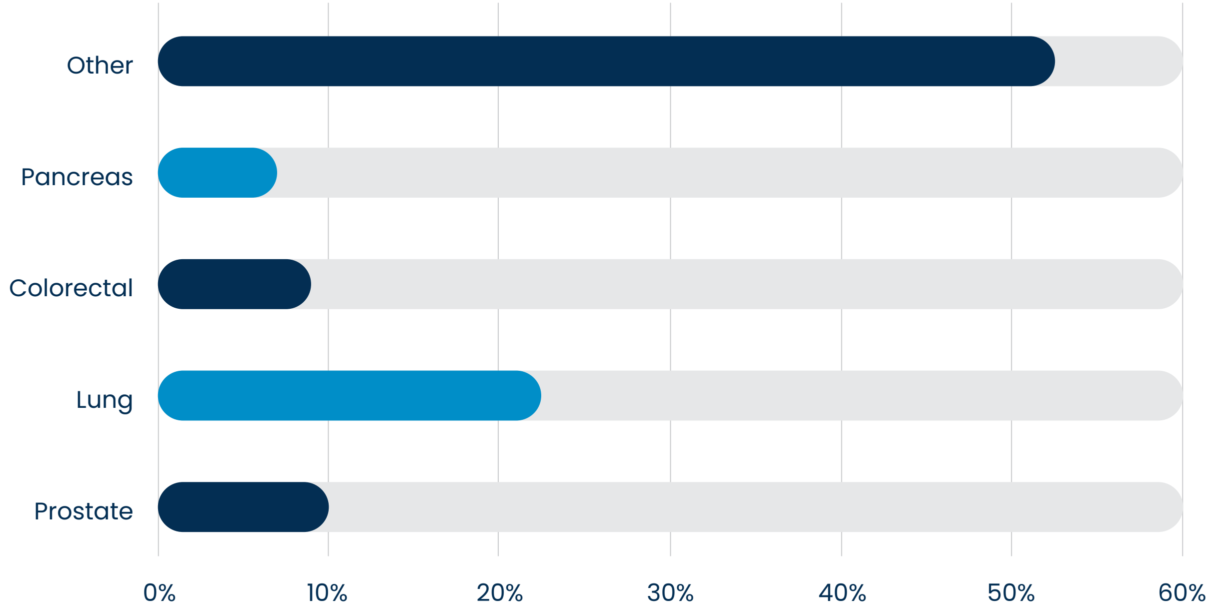


Figure 2.4. Massachusetts Cancer Mortality Among Females

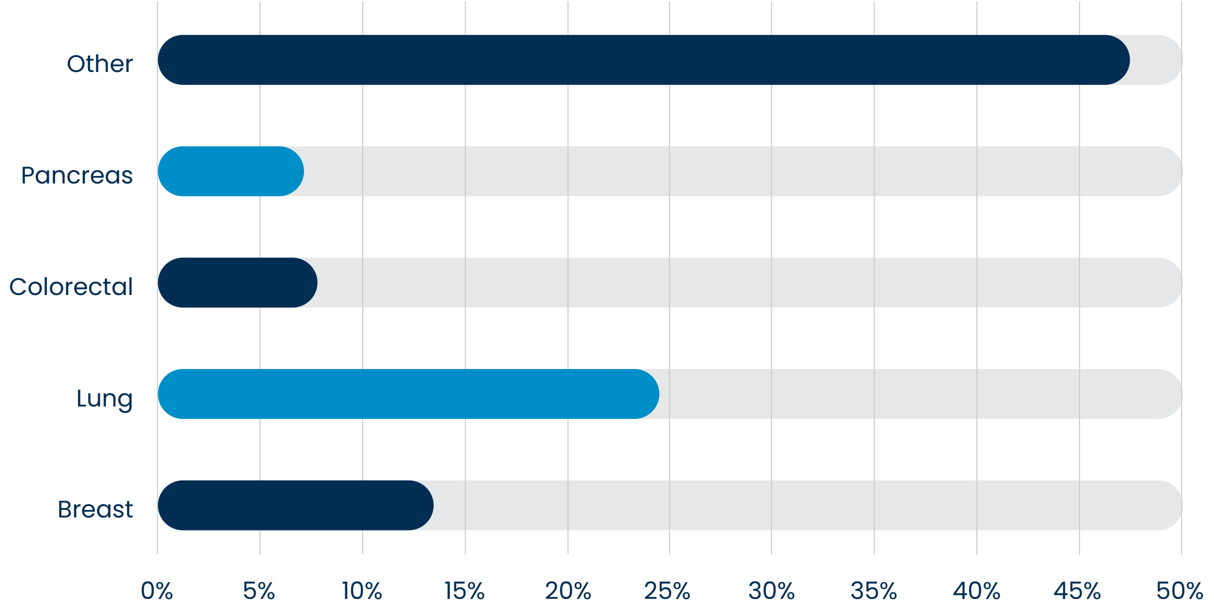


FIGURE 2. LEADING CANCER INCIDENCE AND MORTALITY BY SEX, 2016-2020 (cont.)

Cancer Stage at Diagnosis

The stage of cancer refers to the extent of the cancer based on indicators such as where a tumor is in the body, how large a tumor is, or if it has spread.

Some cancers, such as prostate cancer and female breast cancer, were most often diagnosed at earlier stages in Massachusetts, compared to lung cancer, which was usually diagnosed at a later stage after cancer cells spread away from the primary tumor (Figure 2).

Staging helps health care providers determine appropriate treatment plans. Tracking the stage at diagnosis for common cancers is also an effective way to monitor the impact of cancer screening to detect cancers early.

Figure 3.1. Cancer Stage at Diagnosis

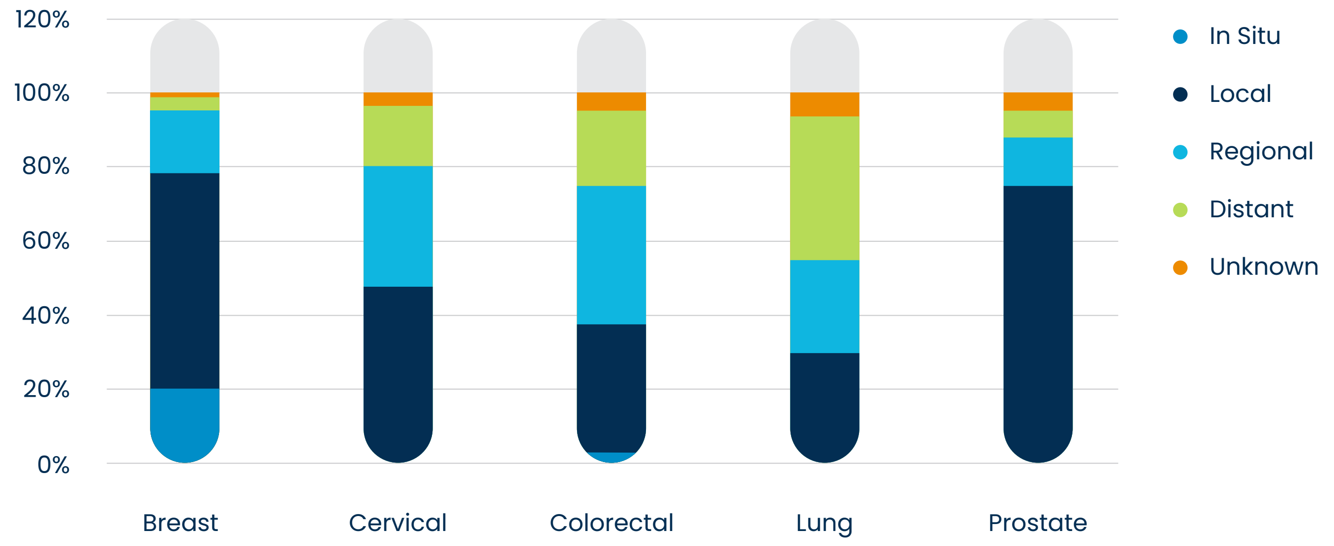


FIGURE 3. CANCER STAGE AT DIAGNOSIS, % OF TOTAL CANCER CASES BY TYPE, 2016-2020

Cancer Disparities

The burden of cancer varies by race and ethnicity as well by sex, and the reasons for these variations are complex. Understanding where the disparities exist is important to identifying the appropriate interventions that can help address the differences and gaps in health outcomes.

Looking specifically at cancer incidence in Massachusetts, the disparities are evident. Between 2016 and 2020, Black and White non-Hispanic males and White non-Hispanic females had the highest incidence rate of all cancer types combined among all racial/ethnic groups. During the same period, Black non-Hispanic females had the highest cervical cancer incidence rates among all racial/ethnic groups.

Disparities in mortality rates for the leading cancer sites are prevalent as well. White non-Hispanic males had the highest mortality rate of all cancer types combined compared to other racial/ethnic groups between 2016 and 2020, while White non-Hispanic females had the highest mortality rate among females. Black non-Hispanic males in Massachusetts had significantly higher prostate cancer mortality rates compared to the other racial/ethnic groups in the state between 2016 and 2020. Similarly, despite having lower breast cancer incidence, Black non-Hispanic females had elevated mortality rates compared to White non-Hispanic females and significantly elevated rates compared to Asian non-Hispanic and Hispanic females.

Age-Adjusted Incidence and Mortality Rates* in Females

Cancer Site	**All Races**	**White, Non-Hispanic**	**Black, Non-Hispanic**	**Asian, Non-Hispanic**	**Hispanic**
INCIDENT RATE					
All Sites	433.9	448.8	387.2	284.0	323.3
Breast	136.8	142.8	122.5	96.3	95.0
Lung	58.1	62.4	38.7	30.8	26.9
Colorectal	28.6	29.0	28.2	22.3	23.1
Cervical	5.2	4.7	9.3	3.6	6.8
Melanoma	2018-2020 data are not complete				
MORTALITY RATE					
All Sites	124.0	127.8	111.6	76.3	81.6
Lung	30.4	32.6	17.7	17.3	12.1
Breast	16.6	16.8	17.8	8.9	11.7
Colorectal	9.4	9.6	8.7	5.8	6.0
Cervical	1.1	1.0	1.5	1.9	1.5
Melanoma	1.5	1.7	< 20 cases	< 20 cases	< 20 cases

TABLE 1. AGE-ADJUSTED INCIDENCE AND MORTALITY RATES* FOR SELECTED CANCER SITES AMONG MASSACHUSETTS FEMALES BY RACE, 2016-2020

Age-Adjusted Incidence and Mortality Rates* in Males

Cancer Site	**All Races**	**White, Non-Hispanic**	**Black, Non-Hispanic**	**Asian, Non-Hispanic**	**Hispanic**
INCIDENT RATE					
All Sites	491.3	500.3	493.9	306.9	388.5
Prostate	115.5	112.5	187.0	54.7	102.9
Lung	63.0	64.9	55.1	48.2	43.0
Colorectal	37.2	37.4	39.1	31.8	33.3
Melanoma	2018-2020 data are not yet available				
MORTALITY RATE					
All Sites	174.0	178.2	166.9	114.9	114.5
Prostate	18.5	18.0	35.3	7.2	17.5
Lung	38.7	40.2	30.5	31.7	19.3
Colorectal	13.2	13.4	15.6	8.1	8.5
Melanoma	3.2	3.7	< 20 deaths	< 20 deaths	< 20 deaths

TABLE 2. AGE-ADJUSTED INCIDENCE AND MORTALITY RATES* FOR SELECTED CANCER SITES AMONG MASSACHUSETTS MALES BY RACE, 2016-2020

Examining Community Health Barriers

The social determinants of health and their root causes lead to an inequitable burden of cancer in some communities. The social, physical, and built environments in which people live may increase their exposure to environmental risks for cancer; limit their ability to practice healthy behaviors; and restrict access to the care and support they need to prevent, treat, and survive cancer. In addition, their treatment options may be affected by social biases present within the health care system. This section provides more information about the barriers faced by four communities in our state — people of color, persons with disabilities, LGBTQ+ communities, and rural populations. Information is compiled from the State’s annual adult survey of health and risk behaviors, data from the Massachusetts Cancer Registry, and evidence from the literature (Behavioral Risk Factor Surveillance System [BRFSS]). While this section describes these groups as distinct populations, when an individual identifies with more than one community facing an inequitable cancer burden, barriers can be compounded.

Barriers for People of Color

Black non-Hispanic communities, Hispanic communities, and other communities of color experience greater obstacles to cancer prevention, detection, treatment, and survival. These obstacles can include structural racism, higher rates of poverty, lack of access to affordable healthy foods, poor quality education and housing, and unsafe environments.[8]

A clear example of structural racism is the history of redlining, a practice where neighborhoods of color were marked as risky for investment. This led to economic exclusion, neighborhood disinvestment, and limited social mobility. This legacy of redlining has also affected health disparities through the pattern of hospital closings and reduced access to healthcare in these areas.[9] A study published in 2020 linked higher risk of late-stage diagnosis for breast and lung cancer with historical redlining practices in Massachusetts.[10]

There is also a connection between redlining and food environments, with major chain supermarkets often unwilling to locate their stores in low-income neighborhoods.[11] In Massachusetts, Black and Hispanic/Latine adults reported higher rates of obesity and Hispanic adults reported diets lower in fruits and vegetables which point to difficulties in accessing healthy foods. Food insecurity is also higher in communities of color. A 2021 survey by the Greater Boston Food Bank found that food insecurity affected 53% of Black adults and 61% of Latine adults, compared to 32% of all Massachusetts adults.[12]

These inequities influence disparities in screening rates, with lower rates of cervical cancer screening and colorectal cancer screening among Black, Hispanic/Latine, and Asian adults as compared with White adults.[13] As reported in the cancer burden section above, Black women also have the highest incidence of cervical cancer in Massachusetts.

People with fewer resources have less access to high-quality health care because of inadequate health insurance. In 2022, 1.7% of White residents in Massachusetts were uninsured, while 4.2% of Black residents and 7.4% of Hispanic/Latine residents were uninsured.[14]

Finally, social inequalities, such as language barriers and provider bias, can affect interactions between patients and physicians and lead to miscommunication and poor quality of care. Even within the same socio-economic status groups, racial and ethnic disparities due to biases in the health care system are still seen. People of color are more likely to receive lower-quality health care than White individuals, even when health insurance status, age, severity of disease, and health status are similar.[15] These ongoing disparities highlight the deep and widespread barriers to achieving equitable health outcomes for people of color.

Barriers for Persons with Disabilities*

Significant health inequities exist for and among disabled people shaped by discrimination, inaccessibility, and other barriers that disabled people experience throughout health systems and society.[16] In 2022, people with disabilities in Massachusetts reported being diagnosed with cancer at higher rates, 12.4% as compared with 7.0% of people without a disability.[17] Socioeconomic, environmental, and other disability-related barriers have a significant impact on cancer prevention and health care access.[18] In the US, existing health policies can contribute to extra costs for health care and assistive technologies. Disabled people are estimated to have at least twice the amount of out-of-pocket health care expenses and three times greater odds of delaying or forgoing care due to cost compared to non-disabled people.[19] Twelve percent of disabled people in Massachusetts reported not seeing a doctor due to cost in 2022, versus 5% of people without a disability.[20] Persons with disabilities may lack employer-paid health insurance or the financial resources for private health insurance due to high rates of unemployment because of discrimination.

**MCCC is aware that some disabled communities prefer identity-first language and some prefer person-first language. Both are used throughout the Plan.*

The absence or poor enforcement of policies addressing the built environment can be at the root of healthcare disparities for those with mobility-related disabilities. Inadequate diet and food access can be affected by socioeconomic and environmental barriers. Limits to accessibility in the built environment may mean that shopping and preparing food is difficult. In Massachusetts, people with disabilities experience higher rates of obesity and physical inactivity, and eat fewer fruits and vegetables as compared with people that do not have a disability.[21]

Sociocultural attitudes, stereotypes, and under-representation in health fields influence how health professionals, researchers, and policy-makers approach disability.[22] Poor interactions with the health care system can lead to anticipation anxiety regarding procedures, as well as delaying or not seeking care at all. A research study conducted by the Massachusetts Coalition for Serious Illness found that people with disabilities left health care visits feeling unsure about medications, treatment discussions, and next steps 19% of the time, as compared with 9% of those without disabilities.[23] Primary care providers may focus on a person's disability and neglect to discuss other preventive health matters. In the Commonwealth, adults with a disability were screened for cervical cancer at rates 7.9% lower, and for breast cancer at rates 5.6% lower, than those without a disability.[24]

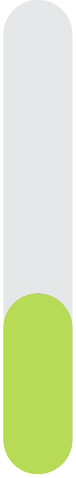
Barriers for LGBTQ+ People

There is a significant impact of social and institutional discrimination on cancer prevention and health care access for LGBTQ+ populations.[25] Differences in economic resources because of job selection and discrimination may result in lower earning potential of LGBTQ+ populations. In 2021, 51% of LGBTQ+ adults in Massachusetts reported being food insecure as compared with 32% of adults overall in the state.[26] 11.8% of LGBTQ+ people in Massachusetts could not see a doctor due to cost in 2022, compared to a rate of 5.2% among straight cisgendered people.[27]

Adults in the LGBTQ+ community experience discrimination in housing, employment, and basic civil rights, as well as harassment and violence. These social factors experienced at the interpersonal, community, and institutional levels are known to increase engagement in health risk behaviors related to cancer. For example, in Massachusetts, LGBTQ+ people smoke cigarettes and drink alcohol at higher rates than straight cisgendered individuals.[28]

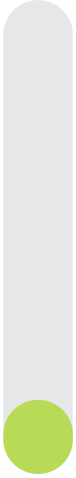
LGBTQ+ people experience high levels of discrimination within the health care system, which has been demonstrated to reduce engagement in preventive health care services.

According to the Center for American Progress's annual survey of LGBTQ+ adults, in 2022:



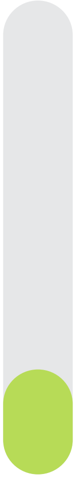
21%

of LGBTQ+ people postponed or did not get preventive screenings due to discrimination or disrespect by providers, compared to **7%** of non-LGBTQ+ adults.[29]



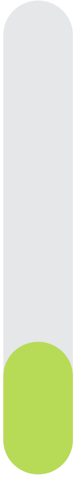
3.7%

Among LGBTQ+ people in Massachusetts, breast cancer screening is 3.7% lower than among non-LGBTQ+ people.



7.2%

Colorectal cancer screening is 7.2% lower.



13.9%

Cervical cancer screening is 13.9% lower than screening rates in those identifying as straight and cisgendered.[30]

Other barriers include physician ignorance regarding LGBTQ+ health risks and needs, lack of insurance coverage or access to partner benefits, clinicians' homophobia and/or transphobia, and poor access to culturally competent health care services.

Rural Communities

Rural communities face significant structural and systemic barriers that negatively impact cancer outcomes. These barriers include limited access to transportation and health care services, inadequate economic investment in rural areas leading to low-wage employment and fewer job opportunities, and urban-centric policies that allocate public investments based on population density. In Massachusetts, DPH has designated two levels of rurality, with 160 of 351 towns classified as rural and 10% of the state's residents living in these areas.[31]

Although the Massachusetts Cancer Registry does not currently provide data classified by rural and urban designations, national research highlights how systemic barriers in rural areas affect cancer prevention, treatment, and survivorship. These barriers include shortages in the health care workforce, with fewer primary care and specialty providers available in rural areas. This shortage, coupled with the necessity to travel long distances and limited transportation options[32], leads to disparities in timely screening, diagnosis, and treatment of cancer.[33] Additionally, the availability of affordable, nutritious, and culturally relevant foods is often limited in rural areas.

High rates of poverty among rural populations living in areas with limited economic opportunities places a heavy financial burden on individuals living with cancer. A 2022 policy brief by the American Cancer Society Cancer Action Network reported that individuals in rural areas with cancer or a history of cancer frequently delay medical care, struggle to pay medical bills, and experience high rates of food insecurity. Alarmingly, 17.4% of rural residents with a history of cancer reported skipping, taking less, delaying, or not obtaining medication due to costs. These financial constraints further hinder effective cancer treatment and survivorship in rural communities.[34]

08

The State Cancer Plan

The State Cancer Plan

The 2024 - 2029 State Cancer Plan is organized by the 5 stages of the cancer continuum. Within each of these stages, the Plan sets out a specific goal, followed by objectives and strategies that are believed to be important to reaching that goal. Within the Cancer Plan, cross references are made to indicate aligned objectives and strategies across priority areas.

1
Primary Prevention

2
Secondary Prevention

3
Diagnosis & Treatment

4
Survivorship

5
Palliative Care

Goals:
Broad statements of program purpose that describe the expected long-term effects of a program. Goals represent a general focus area.

↓

Objectives:
Statements that describe results to be achieved. Objectives indicate what will be done, by when, and relate to measures of success.

↓

Strategies:
Specific processes or steps that will lead to achieving objectives.

The MCCC will not achieve the Plan's goals alone. Help from a range of partners will be needed to make the Plan a success, including individual residents. In each priority section, you will see symbols that show whose participation is needed to accomplish Plan objectives. As the creators and champions of this Plan, MCCC will coordinate with collaborators in executing strategies. Success toward each goal and objective will be measured according to the Program Evaluation and Performance Measures outlined later in this document.

09

Goals, Objectives, and Recommended Strategies

Partner Symbol Key

Next to each strategy in the Plan you will see symbols representing partners the MCCC intends to engage to help carry out the Plan. Advocacy-related activities and strategies listed below will not be conducted by any partner organization, such as the MA Department of Health, using state and/or federal funding.

Within the Cancer Plan, cross references are made to indicate aligned objectives and strategies across priority areas. For example, see P1-O2-S2 (Priority 1- Primary Prevention, Objective 2- decrease substance use, Strategy 2- promote existing campaigns to reduce substance use).

Government Organizations

Health Insurance Providers

Health Care Providers

Massachusetts Comprehensive Cancer Coalition

Community Residents

Community-Based Organizations and Nonprofits

Academic Partners

Businesses/Worksites/ Employers and Schools

Advocacy Organizations and Policy Makers

Priority 1: Primary Prevention

Many factors can increase your risk of getting cancer, such as your age, family history and genetics, other medical conditions, health behaviors, and environmental hazards. Importantly, many of the health behaviors that are most effective in preventing cancer cannot be achieved by the individual alone; conditions must be in place to make healthy lifestyle choices. Primary prevention focuses on addressing the risk factors that can be changed through a set of policy, system, and environmental (PSE) approaches. Examples of PSE strategies for primary prevention include implementing tobacco-free workplace policies, supporting workplace leave policies that allow people to take time from work to get screened, and expanding nutritional assistance programs.

Social determinants of health can produce inequitable health risks and cancer outcomes that are preventable. For example, in MA, historically racist policies such as redlining have resulted in the segregation and concentration of people of color into divested communities that are vulnerable to food, alcohol, and tobacco industry targeting. These communities lack safe spaces and green spaces, and are more prone to food insecurity and exposure to harmful pollutants and environmental toxins. Consequently, people of color have continually been exposed to more hazardous living conditions and less able to practice healthy behaviors, and these inequities have persisted over time. Addressing the SDoH and preventing cancer requires upstream interventions at the system, policy, and environmental levels. Some of the areas where cancer prevention efforts can focus include increasing access to healthy foods, mitigating the effects of radon, increasing HPV and HBV vaccination, incorporating health considerations into the built environment, increasing transportation access, expanding tobacco cessation and prevention programming, reducing alcohol use, increasing sun safety measures, promoting physical activity, and improving the management of chronic disease.

In the strategic planning process, the MCCC recognized the need to identify and track additional metrics and measures for primary prevention. Due to the wide range of community conditions affecting cancer risk, no centralized system currently exists to capture data, nor is there a standardized set of metrics to monitor progress in primary prevention efforts. Collaboration and sharing data among partners will be critical to developing common measures and assisting in evaluation. The MCCC hopes to identify existing data and data gaps, modify existing surveys to include more questions focused on primary prevention, and promote data transparency across organizations.

Primary Prevention Goal: Prevent cancer from occurring by strengthening community conditions that promote health equity and significantly reducing cancer risk factors for all people in Massachusetts.

Objective 1: Basic Necessities

Increase the percentage of families who can afford the **basic necessities** of housing, food, childcare, healthcare, and transportation by December 31, 2029.

Strategies for Objective 1:

01

Share information on existing programs that provide support and resources for basic necessities with those populations who are the most disproportionately impacted. (Providers, CBOs, Insurers, MCCC, Government)

02

Work with expert partners already engaged in advocacy efforts to educate decision-makers on the connections between Social and Structural Determinants of Health and Cancer. (Policy, MCCC)

Topics for education will include:

- How earning a living wage impacts families at risk of experiencing cancer disparities
- Housing policies, such as the availability of housing subsidies
- Zoning laws regarding the percentage of affordable housing

03

Advocate for a consistent payment and reimbursement model for health systems to provide continuity in patient navigation and care coordination services. (See also: P2-O3-S1, P2-O5-S4, and P5-O2-S4) (Providers, Insurers, Policy, MCCC)

04

Engage with partners to advocate for the continuation of COVID-19 pandemic-related relief programs that pull children out of poverty. (Insurers, Policy, CBOs)

05

Collaborate with partners to research, promote, and implement best practices and policies that improve transportation, childcare, and access to food security for populations who experience the greatest cancer disparities. (See also: P2-O2-S4 and P3-O4-S1) (Providers, CBOs, Policy, Academia)

Objective 2: Substance Use

Decrease substance use in youth and adults by 5% by 2029.

Strategies for Objective 2:

01

Partner with parents, schools, health care providers, alcohol treatment specialists, faith-based groups, local coalitions, and other community organizations in prevention and reduction efforts aimed at decreasing use of alcohol, tobacco, and vaping by youth. (Providers, CBOs, Community, Business)

02

Work with partners, including medical and oral health providers, to promote existing age-appropriate substance use campaigns and programs (e.g., tobacco cessation programs, the MA Tobacco Quitline, use of nicotine replacement therapy) to assist quitting, and to educate on the adverse consequences of excessive drinking, smoking tobacco, and vaping, and the cancer risks associated with the co-use of substances. (Providers, Gov't, CBOs)

03

Collaborate with partners to develop and promote new vaping programming and initiatives for youth in populations who experience the greatest cancer disparities. (CBOs, Policy, Gov't)

04

Join with existing technical assistance providers and funded tobacco control programs to advocate for local policies and strategies to address tobacco industry targeting of youth and for broader enforcement of vaping laws and regulations. (CBOs, Policy, Gov't, Community)

05

Support Massachusetts Tobacco Cessation and Prevention Program's local level policy, systems, and environmental change work. (Policy, Gov't, MCCC)
Examples of this work include:

→ Policies focused on density of tobacco retailers

→ Capacity-building to increase understanding of the role of structural racism in current and historical tobacco and nicotine exposure and usage

06

Educate the public about the link between alcohol consumption and increased risk of cancer. (CBOs, Gov't, MCCC, Providers)

Objective 3: Healthy Foods & Physical Activity

Increase the percentage of youth and adults who have **access to healthy foods and safe spaces to be physically active** by 2029.

Strategies for Objective 3:

01

Partner to create safe and accessible public spaces in communities of greatest need to encourage physical activity opportunities. (Policy, Gov't, CBOs)

02

Work with partners to establish active transportation projects like accessible pedestrian and biking paths in communities of greatest need. (Policy, Gov't, CBOs, Community)

03

Advocate for increased funding for and participation in nutrition assistance programs. Examples include the Supplemental Nutrition Assistance Program (SNAP); the Healthy Incentive Program (HIP); the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC); and the Child and Adult Care Food Program. (Insurers, Policy, CBOs, Community)

04

Partner to make information and data available about the positive impact of healthy eating and physical activity on cancer risks. Ensure that all communication materials are available in languages and literacy levels that are inclusive for most. (Gov't, Providers, Academia)

05

Collaborate with partners to identify and advocate for state level tax legislation related to healthy eating such as excise taxes on sugar sweetened beverages, and devoting revenue to obesity prevention programs that reduce health disparities. (Providers, CBOs, Insurers, Policy, Academia)

06

Join with partners to educate health care and community-based providers on stigma, cultural humility, and social determinants of health when screening for obesity, treating obesity. Encourage referrals to culturally and linguistically appropriate support services. (Providers, CBOs, Gov't)

Objective 4: HPV & HBV Vaccination

Increase the percent of people who are fully **vaccinated for HPV and HBV** according to guidelines by 2029.

Strategies for Objective 4:

01

Promote beginning HPV vaccination efforts starting at age 9 to increase completion rate. (Gov't, Providers, MCCC, CBOs)

02

Share resources with healthcare providers and vaccinators to assist them in speaking with parents of children and adult patients, and encourage best practices related to HPV and HBV immunization. (Providers, CBOs, MCCC, Gov't)

→ Conduct provider training on motivational interviewing and other evidence-based skills for offering high quality vaccination recommendations

03

Investigate additional state data sets including the Data Reporting and Visualization System (DRVS) used by some federally qualified health centers, and the Massachusetts Immunization Information System (MIIS), to measure and routinely track HPV vaccination rates in children 9-10 years old. (Gov't, Policy, MCCC)

04

Explore and implement approaches to increase trust in HPV and HBV vaccines. (Providers, Community, CBOs, Gov't, Schools, MCCC)

→ Ensure promotional and educational materials for these HPV/HBV vaccine facts that are culturally and linguistically appropriate

→ Collaborate with parents, schools, community-based, and faith-based organizations, including in the development of a communication plan to increase demand for the HPV vaccine in prioritized communities

→ Promote the practice of scheduling the next immunization visit before the patient leaves a provider site

→ Promote utilization of MIIS data to understand actual vaccination rates within a practice

05

Join with partners to advocate for integrating an HPV module into the evidence-based sexual health curriculum that is required in school systems. (Business, CBOs, Policy, Schools)

Strategies for Objective 4: (cont.)

06

Collaborate with community health centers and oral health providers, dental schools, and Pharmacy Clinics to promote and improve vaccination efforts. (Providers, Academia, Gov't, Schools/Businesses)

→ Partner with dental schools to ensure all students are graduating with vaccine competency, including their administration

→ Increase the number of dental providers registered in the MIIS system

→ Increase immunization program training options and target dental vaccinators

Objective 5: Primary Care

Increase the number of people who have and utilize **primary care** by 2029.

Strategies for Objective 5:

01

Encourage the use of telehealth for regular check-ups. (CBOs, Insurers, Providers)

02

Engage community-based organizations, pediatric practices, pharmacies, and minute-clinics in helping people connect with primary care across the lifespan. (Providers, CBOs, Businesses)

03

Promote awareness of the importance of getting a regular check-up and how to access primary health care-related support services. Focus on populations at greatest risk of cancer disparities and ensure materials are linguistically and culturally appropriate. (Providers, CBOs, Gov't)

04

Explore mechanisms to cover or reimburse health-related travel costs to decrease transportation barriers to care. (Providers, CBOs, Insurers, Policy)

05

Promote occupations in the health care field among priority populations to change the 'face' of health care. Partner with the Department of Elementary and Secondary Education (DESE), community-based organizations, and other key organizations. (Providers, CBOs, Academia, Schools, Gov't)

06

Advocate for expanded hours in primary care settings in communities with populations at greatest risk of cancer disparities. (Providers, Policy)

07

Endorse the use of mobile clinics in communities with populations at greatest risk of cancer disparities. (Providers, Academia, Insurers)

08

Partner with community-based organizations with expertise in working in immigrant communities to provide culturally and linguistically appropriate education about the importance of preventive care and facilitate access to primary care services. (Providers, CBOs, Gov't)

Objective 6: Environmental Risks

Reduce exposures to **environmental risk factors** for cancer, particularly among populations unduly burdened by toxins and environmental contamination by 2029.

Strategies for Objective 6:

Indoor Air Quality

01

Provide Indoor Air Quality Best Practice Recommendations, including radon testing and mitigation strategies, to the Massachusetts School Building Authority. Prioritize schools in environmental justice (EJ) communities and those with the most need. Environmental justice communities are defined by the MA Executive Office of Energy and Environmental Affairs. (Gov't, Business)

Sun Exposure

02

Advocate to allow people to buy sunscreen with food stamps. (Insurers, Policy)

03

Research, identify, and promote best practices for sunscreen dispensers in public parks, especially in communities with populations at greatest risk for cancer disparities. (Community, Schools, CBOs, MCCC, Gov't)

Sun Exposure (cont.)

04

Partner with high sun exposure worksites to educate on the benefits of practicing sun protective behaviors at work, and implement environmental strategies to encourage sun protection such as providing shade structures. Partner industries may include landscaping, construction, and farming. (CBOs, Business, Gov't)

Radon

05

Educate medical providers on the exponential risk of radon exposure combined with tobacco use through partnership with the MA Tobacco Cessation Program and increase promotion of the Massachusetts Medical Society's Continuing Medical Education course, Radon Exposure and Health Risks. (Providers, Academia, MCCC, Gov't)

06

Explore legislation and sub-regulatory guidance for radon disclosure and testing requirements by homeowners and for new home construction. Ensure the provision of information on cancer risk education, exposure prevention, testing, and test results disclosure to builders, potential home buyers, and during residential real estate transactions. (Business, Policy)

Strategies for Objective 6: (cont.)

Radon (cont.)

07

Target radon outreach to communities with higher residential radon levels, higher smoking rates, and those who experience a disproportionate burden of environmental exposures including environmental justice communities. (CBOs, Community, Gov't)

08

Explore mechanisms for renters and lower income homeowners to obtain free radon testing and mitigation assistance. (Gov't, Policy)

09

Advocate for policies requiring schools and early education and care programs to test for radon and provide funding sources for remediation. (Policy, Business, MCCC)

Drinking Water

10

Partner with local boards of health to provide education and promote private well testing, particularly in communities with bedrock aquifers that may have a higher probability of naturally occurring arsenic and uranium. (CBOs, Community, Gov't)

Objective 7: Hepatitis C Infection

Increase rates of cure of hepatitis C infection

Strategies for Objective 7:

01

Prevent new hepatitis C infections by improving access to hepatitis C virus (HCV) prevention and treatment. (Gov't, Providers, CBOs)

- Support implementation of syringe services programs (SSPs) as approved by local boards of health (LBOH)
- Strengthen the capacity of SSPs to provide comprehensive harm reduction services, including HCV testing and linkage to treatment

02

Improve hepatitis C health outcomes by increasing access to and completion of HCV treatment. (Gov't, Providers, CBOs)

- Support training and education for clinical providers to address stigma and promote screening and treatment, consistent with guidelines and recommendations
- Support training and education for community-based providers to promote screening, linkage to treatment, and support for treatment completion

03

Reduce Hepatitis C-related Disparities and Health Inequities: Support highly-targeted, community-based services to increase access to/uptake of testing, and navigation for treatment completion. (Gov't, Providers, CBOs)

04

Improve hepatitis C surveillance and data usage. (Gov't)

- Regularly update and publish surveillance and related analysis accurately and promptly to characterize epidemics and trends, and to identify areas for public health intervention
- Strengthen surveillance and epidemiologic infrastructure to improve data quality, and to leverage novel sources of data to enhance population-level monitoring and impact analysis

05

Integrate and coordinate efforts to address hepatitics C among all partners to increase access to and utilization of testing and curative treatment, emphasizing partners providing health and related services to individuals with SUD. (Gov't, Providers, CBOs)

Priority 2: Secondary Prevention

Secondary prevention focuses on the early detection and control of cancer through cancer screening. The goal of cancer screening is to find cancer, or abnormal cells that may become cancer, before it causes symptoms and when it may be easier to treat successfully. For almost all types of cancer, better results are seen when treatment is started as early as possible, which is why screening is so important.

An effective screening test finds cancer early, reduces the chance that someone who is screened regularly will die from the cancer, and has more potential benefits than harms. Professional organizations recommend screening for breast, cervical, and colorectal cancers. Lung cancer screening is recommended for certain adults who are at high risk due to their smoking history and age. It is recommended that age-eligible patients have shared decision-making conversations with their providers about the risks and benefits of prostate-specific antigen (PSA) testing for prostate cancer.

Secondary Prevention Goal: Ensure everyone in Massachusetts understands their risk factors for cancer and has equitable access to cancer screenings and follow-up care according to best practice guidelines.

Objective 1: Lung Cancer Screening

Increase the percentage of currently eligible patients who have received **lung cancer screening** within the previous year by 5% by 2029.

Strategies for Objective 1:

01

Increase provider capacity to recommend appropriate lung cancer screening to eligible patients by partnering with primary care associations. (Providers, CBOs, Gov't, MCCC)

→ Promote the continuing medical education course developed by the Massachusetts Medical Society and DPH, "Updates to CT Lung Screening." The course provides information on lung cancer screening eligibility guidelines and comprehensive lung cancer risk factors

→ Develop and disseminate guidance and decision tools for providers to interpret guidelines and empower patients to make the decisions that are best for them, particularly if they are part of a high-risk group

02

Build partnerships between community health centers and lung cancer screening facilities for timely and accessible referrals in order to reduce structural barriers to screening and follow-up care, and to provide care that is culturally and linguistically appropriate. (See also: P2-O2-S1) (Providers, MCCC, Insurers, Gov't)

→ Engage community health workers and patient navigators to assist with education and coordination of care

03

Partner with community-based organizations (CBOs) to conduct education and outreach to promote lung cancer screening and address stigma and the fear of diagnosis. Seek CBOs with expertise and experience working with priority communities. (CBOs, MCCC, Providers)

04

Develop and disseminate patient-facing educational materials in multiple languages that help increase awareness about the benefits of lung cancer screening. (Gov't, CBOs, Providers)

05

Advocate for health policy initiatives and high-quality research that addresses disparities in lung cancer screening and access to care. Advocate for policies and research addressing social and environmental non-smoking risk factors that disproportionately impact historically underserved populations. (Providers, Academia, Policy, MCCC)

→ Support advocacy by gathering data for populations at increased risk

Objective 2: Colorectal Cancer Screening

Increase the **colorectal cancer screening rate** by 5%, focusing on priority populations with low screening rates, by 2029.

Strategies for Objective 2:

O1

Build partnerships between community health centers and colonoscopy providers for timely and accessible referrals, and culturally and linguistically appropriate screening and follow-up care. (See also: P2-O1-S1) (MCCC, Gov't, Insurers, Providers)

O2

Increase awareness among providers of the efficacy of less invasive colorectal cancer screening methods such as stool-based tests like Cologuard, FIT DNA, and FIT tests. Improve care pathways for those with a positive stool-based test so that they are prioritized for colonoscopy. (Providers, MCCC, Gov't)

O3

Advocate for employers to provide an appropriate amount of paid time-off for colorectal cancer screening. (Business, Policy)

O4

Work with community health centers, community health workers, social workers, and patient navigators to reduce structural barriers to screening and follow-up care and promote available resources including stipends, childcare support, and transportation in each region to reduce the financial burden of colorectal cancer screening. (See also: P1-O1-S5 and P3-O4-S1) (Providers, CBOs)

O5

Partner with community-based organizations to increase colorectal cancer screening among people aged 45-50 by conducting outreach and education; working with community health centers to make FIT kits easily available; and helping to reduce barriers to screening, like transportation. (MCCC, Gov't, Providers, CBOs)

Objective 3: Cervical Cancer Screening

Increase **cervical cancer screening rates** in MA by 5%, particularly for priority populations with low screening rates, by 2029.

Strategies for Objective 3:

01

Increase provider capacity to recommend appropriate cervical cancer screening to eligible patients by partnering with primary care associations and professional organizations. (See also: P2-O4-S1 and P2-O5-S2) (Gov't, Providers, CBOs)

→ Provide training for cervical cancer screening that meets the needs of priority populations, particularly the LGBTQ+ population

→ Provide training for appropriate, welcoming, nonjudgmental, and respectful care. For example, using gendered language describing cervical cancer screening as a women's health issue is less welcoming for transgender and nonbinary people who have a cervix

→ Translate educational materials into as many languages as possible

→ Encourage the use of evidence-based interventions and quality data metrics to improve clinical practice

02

Collaborate with partners to advocate for payers to fully cover all necessary cervical cancer diagnostic care following an abnormal screening. (Providers, Insurers, Policy)

Objective 4: Prostate Cancer Screening

Increase the percentage of patients aged 50 and older who have discussed the benefits and potential harms of prostate cancer screening with their provider by 5% by 2029.

Strategies for Objective 4:

01

Increase provider capacity to have shared decision-making conversations with their patients by partnering with primary care associations and professional organizations. (See also: P2-O3-S3 and P2-O5-S2) (Gov't, Providers, CBOs, Academia)

→ Provide training on shared decision-making models

→ Disseminate guidance and decision tools for providers to interpret guidelines and empower patients to make the decisions that are best for them. Highlight the need for shared decision-making for high-risk groups that are not represented in the guidelines (See also: P2-O1-S1)

→ Provide training and resources on prostate cancer screening that meet the needs of priority populations, particularly gay, bisexual, transgender, and queer patients

02

Create and implement a public and provider-facing campaign with the platform "Everyone is an advocate" for prostate health discussions, including culturally and linguistically appropriate summaries of recommended guidelines. (Gov't, Providers, Community)

→ Percentage of patients aged 50 and over who have discussed the benefits and potential harms of prostate cancer screening with their health care providers

→ Proportion of late-stage (regional and distant) prostate cancer diagnosis in MA

03

Partner with community health centers and primary care practices to utilize community health workers to discuss prostate cancer screening with eligible patients prior to primary care appointments. (Insurers, MCCC, Providers)

Objective 5: Breast Cancer Screening

Increase breast cancer screening rates by 5%, particularly for priority populations with low screening rates and/or higher breast cancer mortality rates, by 2029.

Strategies for Objective 5:

O1

Join regular provider forums to discuss and train on the importance of providing services in linguistically and culturally appropriate ways, especially with patients from priority populations. (See also: P2-O3-S3 and P2-O4-S1) (MCCC, Gov't, Providers)

- Provide training to initiate discussions with patients ages 40-49 about assessing risk status and the harms and benefits of screening
- Provide training for appropriate, welcoming, nonjudgmental, and respectful care. For example, using gendered language describing breast cancer screening as a women's health issue is less welcoming for transgender and nonbinary people who were assigned female at birth
- Translate educational materials into as many languages as possible

O2

Identify and promote opportunities to improve access to necessary follow-up care at other health institutions for patients who receive primary care at community health centers. (MCCC, Providers)

O3

Advocate for third party payers, including government and private insurance companies, to reimburse for uninterrupted navigational services from an abnormal screening through treatment. Navigational services help to ensure timely and complete follow-up, especially for priority populations. (See also: P1-O1-S3, P2-O3-S1, and P5-O2-S4) (Providers, Insurers, Policy)

O4

Collaborate with partners to advocate for payers to fully cover all necessary breast cancer follow-up diagnostic care after a screening with abnormal results. (Providers, Insurers, Policy)

Priority 3: Diagnosis & Treatment

Diagnosis and treatment focus on providing comprehensive, prompt, and accessible cancer treatment and care, which is essential to increasing survivorship and better health outcomes after a cancer diagnosis. Other key components include addressing timely treatment by an appropriate sub-specialist, training and continuing education of medical providers, access to clinical trials, coordinated and accountable models of care, patient navigation, patient-centered care, and shared decision-making. In Massachusetts, disparities remain in cancer treatment and mortality rates among residents, particularly for Black non-Hispanic men and women. In this stage of the cancer continuum, strategies are needed to ensure equity in access to timely and high-quality treatment.

Diagnosis & Treatment Goal: Ensure that all people in Massachusetts receive fair and equitable cancer care through timely and high-quality diagnosis and treatment without systemic social and structural barriers.

Objective 1: Regional Collaborations

Establish and foster **6 regional collaborations** between cancer care organizations and community-based organizations to address barriers to equitable cancer care by 2029.

Strategies for Objective 1:

01

Identify and convene collaborators in each of the MCCC regions of the state. (Gov't, Insurers, Providers, CBOs)

02

Identify barriers to cancer care through collaboration with patient advisory groups, patient navigators, and partners in each region. (Gov't, Providers, CBOs, Community)

03

Identify and implement activities to address political, systemic, and environmental barriers to cancer care. Activities will include restructuring provider education and training to embed health equity and cultural humility, fostering positive and trusting relationships between providers and patients, and engaging the community as valued partners in addressing racism and disparities in cancer care. (Gov't, Providers, CBOs, Community)

04

Develop guidance on cancer care implementation activities for regional champions of the coalition. (MCCC)

05

Collaborate with other priority areas to identify, address, and overcome barriers to equitable care. (MCCC)

Objective 2: Identify & Address Variations in Care

Utilize existing resources and data to **identify and address variations** in standards of cancer care across the state by 2024.

Strategies for Objective 2:

01

In collaboration with the Massachusetts Department of Public Health, review and share existing data to identify variations in treatment across regions. Data sources will include the DPH "Key Findings" presentation, cancer registry data, SDoH data, and community-based data. (Gov't, Providers, CBOs, Academia)

02

Convene regional champions and representatives to identify challenges to and opportunities for standard diagnosis and treatment for at risk populations based on findings from P3-O2-S1. (MCCC, Providers)

03

Build upon key findings and recommend activities to standardize cancer care across the state. (MCCC, Insurers, Providers, Gov't)

04

Create and maintain a resource inventory for cancer diagnosis and treatment options available to share with the Coalition for dissemination. (MCCC)

05

Develop partnerships with community-based organizations and identify a point person(s) who can connect and assist patients and partners with available resources and navigation in each region across the state. (MCCC, Providers, CBOs)

Objective 3: Utilization of Financial Resources

Increase **utilization of financial resources by priority populations** to address cost-related barriers to care by 2029.

Strategies for Objective 3:

01

Collaborate with community-based organizations to identify people at risk of not seeking care due to financial circumstances. Barriers may include loss of income, lack of transportation, the cost of medication, availability of mental health services, and others. (See also: P1-O1-S5 and P2-O2-S4) (Providers, CBOs)

02

Identify and share information about foundations and other funders and resources that provide financial assistance related to cancer care. (CBOs, MCCC, Gov't)

03

Partner with private insurers, MassHealth, and other financial providers to educate navigators and CHWs on available resources, application processes, and qualification requirements for obtaining financial assistance. (CBOs, MCCC, Insurers)

04

Engage patient navigators, community health workers, and social workers to use navigation strategies and interventions to connect patients with financial need to available financial resources identified in P3-O4-S2 and P3-O4-S3. (Gov't, Community, Providers)

05

Identify and promote financial counseling services to aid patients and caregivers in planning for cancer care expenses. (Providers, CBOs, Community)

06

Advocate for increased reimbursement of cancer care expenses. (CBOs, Providers, Insurers, Policy, Community)

Objective 4: Coordination Services

Increase community health workers', patient navigators', and social workers' capacity (skills and number) to provide cancer care **coordination services** by 2029.

Strategies for Objective 4:

01

Convene regional partners to identify where there are gaps in care coordination services. Identify foundations and other resources/entities that provide financial assistance related to cancer care. (MCCC, Providers, CBOs)

02

Identify, promote, and/or create Massachusetts-specific continuing education opportunities for community health workers, patient navigators, and social workers on cancer care coordination and pathways to care. (Gov't, Providers, CBOs, Academia)

03

Advocate for sustainable funding to secure, maintain, and increase the number of community health worker, social worker, and patient navigator positions. Address pay equity, professional development, and manageable caseloads for these positions, particularly in institutions and organizations that serve priority populations. (Policy)

04

Support DPH efforts to include the cancer care health module in accredited community health worker education offered through the DPH website. This module would be part of the community health worker core competencies and elective modules. (Gov't, Policy)

Priority 4: Survivorship

A cancer survivor is anyone who has ever had cancer, from diagnosis through the rest of their life. More and more people are surviving cancer due to earlier detection and improvements in cancer treatment, diagnosis, and follow-up care. In this distinct phase of care, supports must meet the needs of cancer survivors by focusing on health and wellness outcomes, and by promoting health system changes that produce comprehensive and equitable survivorship care through and beyond treatment.

Survivorship Goal: Provide equitable, accessible, and person-centered comprehensive care for people, including children, impacted by cancer by considering their emotional, cultural, physical, spiritual, financial, and social needs.

Objective 1: Treatment Summaries & Survivorship Care Plans

Increase the number of survivors who have received **treatment summaries and survivorship care plans** (SCPs), especially for priority populations, by 2029.

Strategies for Objective 1:

01

Educate primary care providers on the fundamentals of using a survivorship care plan (SCP) to provide care and the importance of asking questions about mental health. (Insurers, MCCC, Providers)

02

Educate survivors, including pediatric survivors and their families, on the benefits of SCPs to facilitate conversations with primary care providers. (MCCC, CBOs, Providers)

03

Collect data to identify and focus efforts on inequities and disparities that currently exist in which patients receive treatment summaries and survivorship care plans. (Gov't, Academia, Providers)

04

Establish ways to utilize existing systems to share SCPs electronically between cancer specialists, primary care providers, and other healthcare professionals to bridge communication gaps and reduce the burden on survivors. (Providers, CBOs)

05

Pilot sharing of SCPs with cancer centers in low-income, rural, and geographically isolated communities to build systems to develop and share SCPs. (Providers, CBOs)

→ Evaluate, modify, and expand utilization of the systems as appropriate including in pediatric cancer survivorship

Objective 2: Community-Based Survivorship Support

Increase the number of Commission on Cancer hospitals and oncology practices that provide access to inclusive **community-based survivorship support** services to reduce barriers to care by 2029.

Strategies for Objective 2:

01

Identify community-based providers of survivorship care services in each region. (MCCC, CBOs)

02

Establish connections between healthcare providers and community-based providers of survivorship care services. Raise awareness and increase knowledge about existing resources and organizations that reduce barriers to accessing services, especially those that are serving priority populations in each region. (Providers, CBOs)

→ Promote websites like Findhelp.org to hospitals and survivors

03

Advocate to standardize and require that all oncology practices provide referrals to inclusive survivorship care services. (Providers, Insurers, Policy)

04

Educate providers to screen for support service needs. (Providers, CBOs, Academia)

Objective 3: Mental Health Screening & Support

Increase **screening and support for mental health** concerns for those impacted by cancer by 2029.

Strategies for Objective 3:

01

Identify existing training and screening resources for recognizing mental health concerns in individuals including children impacted by cancer. Disseminate training opportunities and resources to providers and staff. (Providers, Academia)

02

Promote and disseminate mental health resources for cancer survivors and their families both during and post treatment. Organizations and groups will include social workers, community-based organizations, nurses, telehealth providers, health centers, state agencies, policy organizations, and other groups that address the mental health of cancer survivors. (Gov't, Providers, CBOs, Insurers, Policy)

03

Advocate for the inclusion of mental health screening and referrals during all points of cancer treatment and post-treatment. (Providers, CBOs, Insurers, Policy)

04

Advocate for funding to develop and sustain linguistically and culturally appropriate support groups for priority populations. (Providers, CBOs, Insurers, Policy)

Objective 4: Survivorship Data Sources

Identify and collate existing data sources that include Massachusetts-specific survivorship data to explore gaps in survivorship care and better address inequities related to survivor care by 2029. (see also Objective 1.7)

Strategies for Objective 4:

01

Identify processes to collate existing survivorship data into one central repository. (Academia, Gov't)

02

Explore opportunities to create a survivorship data dashboard. (Academia, Providers, Gov't)

03

Conduct data analysis to identify inequities related to survivor care using existing data sources. (Academia, Gov't)

04

Identify gaps in existing data sources related to quality-of-life measures for survivors including pediatric survivors. (Gov't, Providers)

05

Improve the existing cancer surveillance survey to capture inequities experienced by priority populations regarding survivorship care across the lifespan including pediatrics. (Gov't, Providers, Community)

Priority 5: Palliative Care

Palliative care is a critical component of comprehensive and compassionate cancer treatment. Palliative care helps relieve cancer symptoms, pain, and stress, and improves a person's quality of life through emotional and spiritual support. Effective palliative care requires interdisciplinary teams and coordinated care that help match treatment and support services to individualized needs for each patient. While receiving palliative care, the complimenting medical care may be focused on relieving symptoms or a treatment intended to cure the cancer.

Palliative Care Goal: Ensure that all people in Massachusetts know what palliative care is and receive palliative care when and where they need it.

Objective 1: Palliative Care Awareness

Increase the number of people in Massachusetts who **understand the application of palliative care** across the lifespan, beyond hospice and end of life care, by December 2029.

Strategies for Objective 1:

01

Identify and collect information on existing palliative care educational resources and opportunities in Massachusetts, including national materials. (Providers, Academia)

02

Identify barriers to understanding what palliative care is and how to access it, including referral pathways and care navigation. (Providers, CBOs, Community)

03

Work with community partners, patients, and families to design and evaluate a palliative care educational campaign with particular attention to identified barriers. (MCCC, Providers, CBOs, Community)

04

Utilize existing data and partnerships to reach and educate diverse populations that may benefit from palliative care. (Providers, CBOs, Gov't)

Objective 2: Insurance Coverage & Reimbursement

Establish widespread, **equitable insurance coverage and reasonable reimbursement** for palliative care by 2029.

Strategies for Objective 2:

01

Conduct a landscape analysis of palliative care in Massachusetts and other states to gain a better understanding of reimbursement, scope of coverage, referral pathway, and care navigation models. (MCCC, Providers, CBOs, Academia)

02

Collaborate with the MCCC leadership group to identify resources to support policy work and activities. (MCCC, Policy)

03

Convene key partners such as regional representatives, Massachusetts Public Health Association, MassHealth, and other payers, to develop a policy proposal with recommendations informed by the landscape analysis. The proposal will include recommendations for funding amounts, services to be covered, and approved care delivery sites. (Insurance, Policy)

04

Collaborate with key partners to advocate for policy changes in support of palliative care. (Providers, CBOs, Insurance, Policy, Community)

Objective 3: Palliative Care Competencies

Increase the number of care professionals who are trained in **palliative care competencies** by 2029.

Strategies for Objective 3:

01

Conduct an assessment to understand the current state of who and how many care professionals provide palliative care, their competencies and how they receive training. (MCCC, CBOs, Providers)

02

Using information gathered in Palliative Care Objective 1, Strategy 1, work with MCCC Regional Champions to establish regional connections to understand resources and existing training opportunities across Massachusetts. This would include both current training opportunities and planned training. (MCCC, Providers, Academia)

03

Identify barriers to awareness of and participation in existing training opportunities, especially for care professionals who support priority populations. (CBOs, Providers)

04

Create and promote a centralized electronic repository, such as a website or newsletter, containing information for training opportunities through the MCCC network. (CBOs, MCCC, Providers, Academia)

Objective 4: Referral Pathways & Navigation

Develop clear referral pathways and care navigation to advance equitable access to palliative care services throughout the state by 2027.

Strategies for Objective 4:

01

Identify existing referral pathways and care navigation resources and gaps for palliative care. (Providers, CBOs)

02

Partner with existing palliative care providers to strengthen and expand upon their capacity to reach and support diverse populations. (MCCC, Providers, CBOs)

10

From Planning to Action

The Massachusetts State Cancer Plan is being implemented through the MCCC, including DPH, and other partners throughout the state. The MCCC builds annual Action Plans to guide the implementation of selected objectives and strategies from across the Plan. The MCCC’s Health Equity Committees continue to meet quarterly, or more often as needed, to ensure that progress is made in all priority areas of the Plan. In this action phase, the Coalition may wish to examine additional data and involve key partners who are not members of the Coalition in order to advance the work. It is the aspirational goal of the MCCC to achieve the Plan’s objectives through the accomplishment of the Plan’s strategies by the end of 2029.

11

Evaluation of the Plan

Evaluation of the Plan

Data from a number of consistently collected and reported cancer surveillance systems are used to assess the cancer burden in the Commonwealth and establish the goals, objectives, and priority action steps of the Massachusetts Statewide 2024-2029 Cancer Plan. Cancer data also plays a significant role in the ongoing implementation and evaluation efforts of the Plan to monitor progress and can be used to devise and target cancer prevention and control interventions. Descriptions of the primary data sources used to determine baseline performance measures for each Plan objective are below:

National Program of Cancer Registries (NPCR):
The NPCR supports central cancer registries and the use of registry data across the country. These registries collect data on cancer incidence by type of cancer, stage at diagnosis, and treatment received from hospitals, physicians' offices, surgical centers, therapeutic radiation facilities, and pathology laboratories.

National Behavioral Risk Factor Surveillance System (BRFSS):
The BRFSS is a state-based system of health surveys that collects information on health risk behaviors, preventive health practices, and healthcare access primarily related to chronic disease and injury through annual telephone surveys of more than 400,000 adults nationally each year (CDC _ BRFSS About).

Massachusetts Behavioral Risk Factor Surveillance System:
The Massachusetts BRFSS is a continuous multimode survey of adults ages 18 and older conducted in English, Spanish, or Portuguese. The landline telephone portion of the survey has been conducted in Massachusetts since 1986; however, recently half of the sample comes from cell phone households.

Youth Risk Behavior Surveillance System (YRBS) and Youth Health Survey (YHS):
YRBS is administered by the Massachusetts Department of Elementary and Secondary Education (DESE). The YHS is the Massachusetts Department of Public Health's (MDPH) surveillance project to assess the health of youth and young adults in grades 6-12. The YHS is conducted by the MDPH Health Survey Program in collaboration with the DESE in randomly selected public middle and high schools in every odd-numbered year. In 2010 the YHS became part of the Health Survey Program (HSP). Participants for both surveys include a sample of school classrooms within school districts. These surveys collect data on behaviors and conditions that may compromise the health, safety, and wellbeing of young people across Massachusetts.

Massachusetts Cancer Registry (MCR):
The MCR was established by the Massachusetts Legislature in 1980 and has been collecting data on all newly diagnosed cases of cancer in the state since 1982. In aggregate form, these data are available through various publications and reports, including the Cancer Incidence and Mortality in Massachusetts reports and the City/Town Supplement series. In addition, the MCR collects and analyzes data on stage of diagnosis for different cancers to identify and monitor disparities in screening interventions.[35, 36]

Program Evaluation and Performance Measures

Program evaluation is a systematic collection of information about program activities, characteristics, personnel, and outcomes in order to make necessary decisions about the program.[37] It is a critical component of comprehensive cancer control efforts. The Plan evaluation protocol is consistent with the Framework for Program Evaluation in Public Health developed by the CDC[38] composed of six steps, including: engage stakeholders, describe the program, design evaluation, gather data, justify conclusions, and ensure use and sharing of lessons learned.

The following tables represent the baseline and target performance measures of the Plan as identified by the Massachusetts Comprehensive Cancer Coalition. These performance measures will be used to monitor, assess, and ultimately evaluate the effectiveness of statewide efforts to reach the five-year goals and objectives.

The Plan’s 2029 target performance measures were calculated by increasing or decreasing the baseline data for that objective by 5 percent. Baseline data for those measures where there is no baseline data available (TBD) will be determined based on future data collection efforts.

The baseline and 2029 target performance measures are organized according to key objectives within the five main focus areas of the Plan as shown.

Primary Prevention

Objective 1.1:
Increase the percentage of families who can afford the basic necessities of housing, food, childcare, healthcare, and transportation by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
By 2029, decrease the percentage of adults who have trouble paying for at least one basic need, including housing, transportation, food or groceries, health care, and childcare by 5%.	35.2%	33.4%	CHEI, 2024

Objective 1.2:
Decrease substance use in youth and adults by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE	NOTE
By 2029, decrease the percentage of adults and youth who currently use any tobacco/nicotine products (including vaping) by 5%				
Any tobacco product*				
→ Adults	15.6%	14.8%	BRFSS, 2022	
→ High school	18.4%	17.5%	YRBS, 2021	
Any vape products				
→ Adults	5.6%	5.3%	BRFSS, 2022	Male, 18-24 years old, Disability, < College 4+ years, and LGBT has a significantly higher prevalence.
→ High school	17.6%	16.7%	YRBS, 2021	

Objective 1.2: (cont.)

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE	NOTE
By 2029, decrease the percentage of adults who reported binge drinking** by 5%	17.2%	16.3%	BRFSS, 2022	Male, 25-34 age group, No disability, LGBT has a significantly higher prevalence.
By 2029, increase the percentage of state Quitline usage by 5%				
→ Total number of Quitline referrals by providers	3661	3844	MTCP, 2022	
→ % of Quitline referrals converted into an intake	55.1%	57.9%	MTCP, 2022	
By 2029, Increase the percentage of quit attempts among Massachusetts adult current smokers by 5%	52.1%	54.7%	BRFSS, 2022	There is no significant difference.
By 2029, decrease by 5% both the percentage of women who reported >0 and ≤ 7 drinks per week and the percentage of men who reported >0 and ≤14 drinks per week	51.4%	48.8%	BRFSS, 2022	
By 2029, decrease the percentage of adults who reported heavy drinking*** by 5%	6.7%	6.4%	BRFSS, 2022	

* Any tobacco product (cigarettes, cigars, smokeless tobacco, or vape products)

** Binge drinking was defined as the consumption of five or more drinks for men or four or more drinks for women, on any one occasion in the past month.

*** Heavy drinking was defined as the consumption of more than 14 drinks/week in the past month for men and consumption of more than 7 drinks/week in the past month for women.

Objective 1.3:

Increase the percentage of youth and adults who have access to healthy foods and safe spaces to be physically active by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
By 2029, decrease the percentage of overweight and obese among middle schoolers by 5%			
→ Overweight**	17.1%	16.2%	YHS, 2021
→ Obese***	15.2%	14.4%	YHS, 2021

Objective 1.3: (cont.)

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
By 2029, decrease the percentage of overweight and obese among high schoolers by 5%			
→ Overweight	15.2%	14.4%	YRBS, 2021
→ Obese	13.6%	12.9%	YRBS, 2021
By 2029, decrease the percentage of overweight and obese among adults by 5%			
→ Overweight	61.9%	58.8%	BRFSS, 2021
→ Obese	27.2%	25.8%	BRFSS, 2021
Explore data by specific populations experiencing inequities	TBD		TBD
Number of communities that pass School District Policies that include a focus on food literacy curriculums and create infrastructure for safe walking/biking and rolling to school	TBD		MassDOT-Safe Routes to School program
Number of communities that have completed Community Food Assessments	22	23	MA Food Policy Council, 2024
Number of communities who have Food Policy Councils	24	25	MA Food Policy Council, 2024
Number of communities who have Complete Streets Policies	262	275	MassDOT-Safe Routes to School program, 2024
Number of communities designated as Age-Friendly communities	116	122	AARP

** Being overweight: 85 to 95th percentile for body mass index by age and sex

*** Being obese: ≥95th percentile for body mass index by age and sex

Objective 1.4:
Increase the percentage of people who are fully vaccinated for HPV and HBV by 2029 according to guidelines.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
By 2029, increase the HPV immunization rate for girls and boys ages 9-10 and 13-17 who have had one dose of HPV vaccine by 5 percentage points			
→ 9-10 years old	TBD	TBD	TBD
→ 13-17 years old	85.6%	90.6%	NIS, 2022
By 2029, maintain the 2-year-old hepatitis B vaccine coverage at 95.0%	94.8%	95.0%	NIS, 2020

Objective 1.5:
Increase the percentage of people by 5% who have, and utilize, primary care by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE	NOTE
By 2029, increase the percentage of people who have had a routine checkup in the past year by 5%	81.0%	85.1%	BRFSS, 2022	Male, 25-34 years old, Asian, No disability has a significantly lower percentage.
By 2029, increase the percentage of people who have a personal health care provider by 5%	91.4%	96.0%	BRFSS, 2022	Male, Black/Hispanic/Asian, < High school, < $25,000 has a significantly lower percentage.
By 2029, decrease the percentage of people who could not see a doctor due to cost by 5%	7.1%	6.7%	MTCP, 2022	Hispanic, Disability, < High school, < $50,000, LGBT has a significantly higher percentage.

Objective 1.6:
Reduce exposures to environmental risk factors for cancer, particularly among populations unduly burdened by toxins and environmental contamination, by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Number of schools/early care and education programs (child care providers) educated on indoor air quality including radon testing/mitigation			
→ Schools	16	20 per year	BCEH, 2023
→ Early Care and Education Programs (Child Care Providers)	3	20 per year	BCEH, 2023
Percent of schools/early care and education programs (child care providers) educated on indoor air quality that conduct radon testing			
→ Schools	N/A	25.0%	BCEH, 2023
→ Early Care and Education Programs (Child Care Providers)	N/A	25.0%	BCEH, 2023
Number of medical providers educated on the exponential risk of radon exposure combined with tobacco use (including those who obtain CMEs for taking the MMS's course, Radon Exposure and Health Risks)	498	1300	BCEH, 2022
Residential radon testing rates by community	164 tests per 1,000 occupied units statewide	264 tests per 1,000 occupied units statewide	BCEH, 2024
Residential radon testing rates for environmental justice* (EJ) communities	137 tests per 1,000 occupied units	290 tests per 1,000 occupied units**	BCEH, 2024

*Environmental Justice Populations in Massachusetts | Mass.gov

**Current baseline testing rate of non-EJ communities

Objective 1.6: (cont.)

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Drinking water testing of private wells			
→ Percent of communities with private wells and bedrock aquifers, which have a higher probability of naturally occurring arsenic (an established risk factor for bladder cancer), educated on private well testing	0	100%	BCEH
Sun safety -skin cancer/melanoma rates (MCR), sunburn rates (YRBS)			
→ Incidence of Melanoma of the Skin	24.1 per 100,000 total population	22.9 per 100,000 total population	MCR, 2015-2019
→ Death Rate of Melanoma of the Skin	2.2 per 100,000 total population	2.1 per 100,000 total population	MCR, 2015-2019
Sunburn rates: MA middle school students in public schools reported wearing sunscreen with an SPF of 15 or higher always or most of the time when outside for more than one hour on a sunny day	34.3%	36.0%	YHS, 2023

Objective 1.7:
Increase rates of cure of hepatitis C infection

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Increase HCV cure rates	56%	80%	Hepatitis C disease surveillance data

Secondary Prevention

Objective 2.1:

Increase the percentage of currently eligible patients who have received lung cancer screening within the previous year by 5% by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE	NOTE
Screening rate for the state overall	12.3%	12.9%	BRFSS, 2022	No significant difference in other risk factors

Objective 2.2:

Increase the colorectal cancer screening rate by 5%, focusing on priority populations with low screening rates, by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE	NOTE
Screening rate for the state overall	71.5%	75.1%	BRFSS, 2022	45-54 years old, Black, Hispanic, Other & Multiracial, < High school and < $25,000 have significantly lower screening rates.

Objective 2.3:

Increase cervical cancer screening rates in MA by 5%, particularly for priority populations with low screening rates, by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE	NOTE
Screening rate for the state overall	53.9%	56.6%	BRFSS, 2022	Black, Hispanic, Asian, Disability, < High school, < $49,999, and LGBT have significantly lower screening rates.

Secondary Prevention (cont.)

Objective 2.4:

Increase the percentage of patients aged 50 and older (especially those at high risk [Black patients, patients with family history]) who have discussed the benefits and potential harms of prostate cancer screening with their provider by 5% by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Percentage of Black men aged 50 and over who have discussed the benefits and potential harms of prostate cancer screening with their physicians	35.0%	36.8%	BRFSS, 2022

Objective 2.5:

Increase breast cancer screening rates by 5%, particularly for priority populations with low screening rates and/or higher breast cancer mortality rates, by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE	NOTE
Screening rate for the state overall	84.9%	89.1%	BRFSS, 2022	High School < $25,000 have significantly lower screening rates.

Diagnosis and Treatment

Objective 3.1:
Establish and foster six regional collaborations between cancer care organizations and community-based organizations to address barriers to equitable cancer care by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Number of established partnerships by region	0	TBD	TBD
Implementation activities developed and executed to address regional barriers	0	TBD	TBD

Objective 3.2:
Utilize existing resources and data to identify and address variations in standards of cancer care across the state by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Regional variations in care are documented and shared with the Coalition	0	TBD	TBD
Increased early diagnosis and timely treatment rates for cancer	TBD	TBD	TBD

Objective 3.3:
Identify and address barriers to participation in clinical trials by historically underrepresented populations by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Number of BIPOC patients enrolling in clinical trials	6.8%	7.1%	BRFSS, 2022
Number of other priority populations enrolling in clinical trials	TBD	TBD	TBD
Number of partners that participate in education & outreach of clinical trials	TBD	TBD	TBD

Diagnosis and Treatment (cont.)

Objective 3.4:
Increase utilization of financial resources by priority populations to address cost-related barriers to care by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Number of financial services/referrals provided	TBD	TBD	TBD

Objective 3.5:
Increase community health workers', patient navigators', and social workers' capacity (skills and number) to provide cancer care coordination services by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Number of organizations supporting community health workers and social workers to provide care coordination	TBD	TBD	TBD
Number of community health workers, social workers, and patient navigators engaged in care coordination	TBD	TBD	TBD
Patient experience of coordination efforts	TBD	TBD	TBD

Survivorship

Objective 4.1:
Increase the number of survivors who have received treatment summary and survivorship care plans (SCPs), especially for priority populations, by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Number of treatment summaries and personalized survivorship care plans received	57.9%	60.8%	BRFSS, 2022

Objective 4.2:
Increase the number of Commission on Cancer hospitals and oncology practices that provide access to inclusive community-based survivorship support services to reduce barriers to care by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Number of Commission on Cancer hospitals and practices providing referrals (includes both in-house programs and referrals to community programs)	TBD	TBD	CoC

Objective 4.3:
Increase screening and support for mental health concerns for those impacted by cancer by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
By 2029, increase the percentage of survivors who receive the social and emotional support that they need	89.2%	93.7%	BRFSS, 2022
Number of support groups by region for each priority population	TBD	TBD	CoC

Survivorship (cont.)

Objective 4.4:
Identify and collate existing data sources that include Massachusetts-specific survivorship data to explore gaps in survivorship care and better address inequities related to survivor care by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Survivorship data dashboard created	0	1	

Palliative Care

Objective 5.1:

Increase the number of people in Massachusetts who understand the application of palliative care across the lifespan, beyond hospice and end of life care, by December 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Number of people who report awareness of palliative care	TBD	TBD	TBD
Number of/amount of education opportunities offered in under-resourced communities	TBD	TBD	TBD
Number of modalities in which education is offered (visually/hearing impaired, language, culture, delivery method, etc.)	TBD	TBD	TBD

Objective 5.2:

Establish widespread, equitable insurance coverage and reasonable reimbursement for palliative care by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Number of statewide bills/policy changes introduced	TBD	TBD	TBD
Number of reimbursement codes that cover palliative care	TBD	TBD	TBD
Increased reimbursement rate for palliative care provided by Community-based organizations, etc.	TBD	TBD	TBD
Number of claims for palliative care (All-Payer Claims Database)	TBD	TBD	TBD

Palliative Care (cont.)

Objective 5.3:
Increase the number of care professionals who are trained in palliative care competencies by 2029.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
Number of healthcare providers trained (including the diversity of workforce)	254	266	BORIM, 2023
Number of Advanced Certified Hospice and Palliative Nurse (ACHPN) trained	106	113	Certification Verification Tool, 2024
Number of community-based providers trained (including community health care workers/care navigators, diversity of workforce, etc.)	TBD	TBD	TBD

Objective 5.4:
Develop clear referral pathways and care navigation to advance equitable access to palliative care services throughout the state by 2027.

PERFORMANCE MEASURE	BASELINE	2029 TARGET	DATA SOURCE
#referrals (All-Payer Claims Database)	TBD	TBD	TBD
#first time claims for palliative care (All-Payer Claims Database)	TBD	TBD	TBD

12

Appendices

Appendix A: Glossary of Terms

Age-adjusted rates are summary measures used to compare cancer incidence and mortality trends over time or among different populations whose age distributions differ.

Baseline is an initial measurement data prior to program intervention and is used to serve as a reference point, demonstrate change over time, and monitor progress.

Chronic disease is a medical condition or disease that persists over a long period of time. Conditions, such as heart disease, stroke, cancer, type 2 diabetes, obesity, and arthritis, are among the most common, costly, and preventable of all health problems.

Colonoscopy is a colorectal cancer screening test that allows a doctor to examine the inside of the colon and rectum for polyps, which could be an early sign of cancer.

Commission on Cancer is a program of the American College of Surgeons that recognizes cancer care programs for their commitment to providing comprehensive, high-quality, and multidisciplinary patient centered care.

Continuing Medical Education consists of educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients, the public, or the profession.

CT scan refers to a computerized tomography (CT) scan, which combines a series of X-ray images taken from different angles and uses computer processing to create cross-sectional images of the bones, blood vessels, and soft tissues inside the body. CT scan images provide more detailed information than plain X-rays do.

Dissemination is the act of sharing something, such as information, to many people.

Fecal Immunochemical Tests (FIT) are take-home tests that check for hidden blood in the stool. Testing kits are provided by a healthcare provider to screen for polyps or colorectal cancer. Small samples of stool are placed on special cards and returned to a doctor or laboratory for testing.

Gender can be broadly defined as a multidimensional construct that encompasses gender identity and expression, as well as social and cultural expectations about status, characteristics, and behavior as they are associated with certain sex traits. A person's gender identity (e.g., woman, man, trans man, gender-diverse, nonbinary) is self-identified, may change throughout their life, and may or may not correspond to a society's cultural expectations based on their biological sex traits.

Health disparities are differences in the incidence, prevalence, burden and mortality of cancer that exist among population groups based on factors including, but not limited to, age, class, culture, education, ethnicity, geographic location, gender identity or expression, income, language, national origin, physical or mental disability, race, religion, sex, sexual orientation, socioeconomic status, wealth or other social conditions.

Human Papillomavirus (HPV) is the most common sexually transmitted infection, different from HIV and HSV (herpes). There are many different types of HPV. Some types can cause health problems, including genital warts and cancers.

Immunization is the process in which a person is made immune to a specific infection or disease usually by administering a vaccine. Vaccines stimulate the body's own immune system to protect the person against subsequent infection or disease.

Implement/Implementation refers to the act of doing or using something, such as a plan, or to make something active or effective. Interdisciplinary teams are collaborative patient care teams that work across disciplines, including primary care, nursing, and specialists. Interventions are treatments or actions taken to prevent or treat disease, or improve health in other ways.

Mammograms are X-ray exams of the breast most often used to screen for breast cancer. During a mammogram, breasts are compressed between two firm surfaces to spread out the breast tissue and an X-ray captures black-and-white images to be examined by a doctor for signs of cancer.

Municipal Boards of Health are local, voluntary boards made up of individuals and experts responsible for protecting public health at the city or town level.

Oncology is the study of cancer. An oncologist is a doctor who treats cancer. Usually, an oncologist manages a person's care and treatment once he or she is diagnosed with cancer. The field of oncology has three major areas: medical, surgical, and radiation.

Outcome is the end result or effect of an action.

Palliative care refers to patient and family-centered care that optimizes quality of life by anticipating, preventing, and treating suffering. Palliative care throughout the continuum of illness involves addressing physical, intellectual, emotional, social, and spiritual needs and to facilitate patient autonomy, access to information, and choice.

Pap test (also called Pap smear) is a screening procedure for cervical cancer. It tests for the presence of precancerous or cancerous cells on the cervix.

Patient-centered healthcare is respectful of and responsive to individual patient preferences, needs, and values and ensures that patient values guide all clinical decisions.

PSA test is a blood test used primarily to screen for prostate cancer. The test measures the amount of prostate-specific antigen (PSA) in your blood. PSA is a protein produced by both cancerous and noncancerous tissue in the prostate.

Psychosocial describes the emotional and social parts of a disease and its treatment. Some of the psychosocial parts of cancer are its effects on patients' feelings, moods, beliefs, the way they cope, and relationships with family, friends, and co-workers.

Quit Line refers to the Massachusetts Smokers' Helpline, a free and confidential telephone counseling service for Massachusetts residents who want help to end their tobacco use.

Reimbursement refers to the benefit offered by health insurance to compensate or pay back for a healthcare service.

Sex is a multidimensional biological construct based on anatomy, physiology, genetics, and hormones.

Social determinants of health are the social, economic, and physical conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks.

Structural Racism is the way key areas of society (education, employment, health care, housing, and law enforcement) are structured to benefit the group in power and hinder racial and ethnic minority groups.

Surveillance is the ongoing process of systematic and timely collection and analysis of cancer data including incidence, mortality, risk factors, screening, early detection, treatment, and survival.

Appendix B: References

[1] National Cancer Institute. What Is Cancer? was originally published by the National Cancer Institute. October 11, 2021. https://www.cancer.gov/about-cancer/understanding/what-is-cancer

[2] Health Tree and Root Causes of Cancer: Adapted by Health Resources in Action from the Human Impact Partners

[3] Massachusetts Department of Public Health. Data Report Prostate Cancer in Massachusetts: 2014-2018, 2023. Available at: https://www.mass.gov/lists/cancer-incidence-special-reports.

[4] Massachusetts Department of Public Health. 2022-2026 Strategic Plan for Asthma in Massachusetts. Available at: https://www.mass.gov/doc/strategic-plan-for-asthma-in-massachusetts-2022-2026/download.

[5] Centers for Disease Control and Prevention. About Comprehensive Cancer Control Programs. Available at: https://www.cdc.gov/comprehensive-cancer-control/about/programs.html.

[6] Keim-Malpass J, Vavolizza RD, Cohn WF, Kennedy EM, Showalter SL. (2023) Cancer Screening and Treatment Delays During the COVID-19 Pandemic and the Role of Health Literacy in Care Re-engagement: Findings from an NCI-Designated Comprehensive Cancer Center sample. Journal of Cancer Education, 38(5),1405-1412. doi: 10.1007/s13187-023-02312-w. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC10195653/

[7] Massachusetts Department of Public Health. Cancer Incidence and Mortality in Massachusetts 2016-2020: Statewide report. Massachusetts Cancer Registry. Available at: http://www.mass.gov/eohhs/docs/dph/cancer/state/registry-statewide-report-09-13.pdf

[8] American Cancer Society. Diversity, Inclusion, and Equity in America. [Webpage] Available at: https://pressroom.cancer.org/releases?item=908.

[9] Egede, L.E., Walker, R.J., Campbell, J.A., Linde, S., Hawks, L., and Burgess, K. (2023). Modern Day Consequences of Historic Redlining: Finding a Path Forward. Journal of General Internal Medicine, 38(6), 1534-1537. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9901820/#CR17

[10] Krieger, N., Wright, E., Chen, J.T., Waterman, P.D., Huntley, E.R., Arcaya, M. (2020). Cancer Stage at Diagnosis, Historical Redlining, and Current Neighborhood Characteristics: Breast, Cervical, Lung, and Colorectal Cancers, Massachusetts, 2001-2015. American Journal of Epidemiology, 189 (10) 1065-1075. https://doi.org/10.1093/aje/kwaa045

[11] Li, M., Yuan, F., (2022). Historical redlining and food environments: A study of 102 urban areas in the United States. Health & Place,75. https://www.sciencedirect.com/science/article/abs/pii/S1353829222000363

[12] Greater Boston Food Bank. Opportunities to Improve Food Equity and Access in Massachusetts. [Webpage] Available at: https://www.gbfb.org/wp-content/uploads/2022/06/GBFB_Food-Access_Report22_FINAL_6.6.22-1.pdf

[13] Massachusetts Department of Public Health. A Profile of Health among Massachusetts Adults, 2022. Results from the Behavioral Risk Factor Surveillance System. December,2023. Massachusetts Health Survey Program. Available at: https://www.mass.gov/doc/a-profile-of-health-among-massachusetts-adults-2022

[14] Massachusetts Department of Public Health. A Profile of Health among Massachusetts Adults, 2022. Results from the Behavioral Risk Factor Surveillance System. December,2023. Massachusetts Health Survey Program. Available at: https://www.mass.gov/doc/a-profile-of-health-among-massachusetts-adults-2022

[15] Massachusetts Department of Public Health. Cancer Incidence and Mortality in Massachusetts 2015-2019: Statewide report. 2023. Massachusetts Cancer Registry. Available at: https://www.mass.gov/doc/cancer-incidence-and-mortality-in-massachusetts-2015-2019-statewide-report/download

[16] Lundberg, D.J., Chen, J.A., (2023). Structural ableism in public health and healthcare: a definition and conceptual framework. The Lancet, 30. https://doi.org/10.1016/j.lana.2023.10065

[17] Massachusetts Department of Public Health. A Profile of Health among Massachusetts Adults, 2022. Results from the Behavioral Risk Factor Surveillance System. December,2023. Massachusetts Health Survey Program. Available at: https://www.mass.gov/doc/a-profile-of-health-among-massachusetts-adults-2022

[18] Hughes, R.B., Robinson-Whelen, S., Knudson, C. (2022). Cancer Disparities Experienced by People with Disabilities. International Journal of Environmental Research and Public Health, 19. https://doi.org/10.3390/ijerph19159187

[19] Kennedy J, Wood EG, Frieden L., (2017). Disparities in Insurance Coverage, Health Services Use, and Access Following Implementation of the Affordable Care Act: A Comparison of Disabled and Nondisabled Working-Age Adults. INQUIRY: The Journal of Health Care Organization, Provision, and Financing, 54. https://doi:10.1177/0046958017734031

[20] Massachusetts Department of Public Health. A Profile of Health among Massachusetts Adults, 2022. Results from the Behavioral Risk Factor Surveillance System. December,2023. Massachusetts Health Survey Program. Available at: https://www.mass.gov/doc/a-profile-of-health-among-massachusetts-adults-2022

[21] Massachusetts Department of Public Health. A Profile of Health among Massachusetts Adults, 2022. Results from the Behavioral Risk Factor Surveillance System. December,2023. Massachusetts Health Survey Program. Available at: https://www.mass.gov/doc/a-profile-of-health-among-massachusetts-adults-2022

[22] Lundberg, D.J., Chen, J.A., (2023). Structural ableism in public health and healthcare: a definition and conceptual framework. The Lancet, 30. https://doi.org/10.1016/j.lana.2023.10065

[23] Massachusetts Coalition for Serious Illness Care. 2020-2021 Public Experience Research Findings. November, 2021. Available at: https://www.maseriouscare.org/research-resources/2020-2021-public-experience-research

[24] Massachusetts Department of Public Health. A Profile of Health among Massachusetts Adults, 2022. Results from the Behavioral Risk Factor Surveillance System. December,2023. Massachusetts Health Survey Program. Available at: https://www.mass.gov/doc/a-profile-of-health-among-massachusetts-adults-2022

[25] Matthews, A.K., Breen, E., Kittiteerasack, P., (2018). Social Determinants of LGBT Cancer Health Inequities. Seminars in Oncology Nursing, 34(1), 12-20. https://doi.org/10.1016/j.soncn.2017.11.001

[26] Greater Boston Food Bank. Opportunities to Improve Food Equity and Access in Massachusetts. [Webpage] Available at: https://www.gbfb.org/wp-content/uploads/2022/06/GBFB_Food-Access_Report22_FINAL_6.6.22-1.pdf

[27] Massachusetts Department of Public Health. A Profile of Health among Massachusetts Adults, 2022. Results from the Behavioral Risk Factor Surveillance System. December,2023. Massachusetts Health Survey Program. Available at: https://www.mass.gov/doc/a-profile-of-health-among-massachusetts-adults-2022

[28] Massachusetts Department of Public Health. A Profile of Health among Massachusetts Adults, 2022. Results from the Behavioral Risk Factor Surveillance System. December,2023. Massachusetts Health Survey Program. Available at: https://www.mass.gov/doc/a-profile-of-health-among-massachusetts-adults-2022

[29] Center for American Progress. Discrimination and Barriers to Well-Being: The State of the LGBTQI+ Community in 2022. January, 2023. Available at: https://www.americanprogress.org/article/discrimination-and-barriers-to-well-being-the-state-of-the-lgbtqi-community-in-2022/

[30] Massachusetts Department of Public Health. A Profile of Health among Massachusetts Adults, 2022. Results from the Behavioral Risk Factor Surveillance System. December,2023. Massachusetts Health Survey Program. Available at: https://www.mass.gov/doc/a-profile-of-health-among-massachusetts-adults-2022

[31] Lecy, K., LeBron, A., Lin, T. (2021, October 13). Massachusetts Department of Public Health COVID-19 Community Impact Survey: Rural Communities Spotlight. [PowerPoint slides] https://www.mass.gov/doc/ccis-webinar-slides-rural-communities

[32] National Cancer Institute, GIS Portal for Cancer Research. Rural-Urban Disparities in Cancer. Available at: https://gis.cancer.gov/mapstory/rural-urban/index.html

[33] Nielsen, M., D'Agostino, D., Gregory, P., (2017). Missouri Medicine, 114 (5), 363-366. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6140198/

[34] American Cancer Society Cancer Action Network. The Costs of Cancer in Rural Communities, October 2022. Available at : https://www.fightcancer.org/policy-resources/costs-cancer-rural-communities-0

[35] Massachusetts Department of Public Health. Massachusetts Cancer Registry. [Webpage]. Available at: https://www.mass.gov/lists/cancer-incidence-statewide-reports

[36] Massachusetts Department of Public Health. Massachusetts Cancer Registry. [Webpage]. Available at: https://www.mass.gov/lists/cancer-incidence-city-town-supplement

[37] McNamara, C. Basic Guide to Program Evaluation. Adapted from the Field Guide to Nonprofit Program Design, Marketing and Evaluation. (Webpage]. Available at http://managementhelp. org/evaluation/program-evaluation-guide.htm#anchor1575679

[38] Centers for Disease Control and Prevention. CDC Program Evaluation Framework. [Webpage]. Available at: https://www.cdc.gov/evaluation/php/evaluation-framework/index.html

We acknowledge the Centers for Disease Control and Prevention, for its support of the Massachusetts staff, and the writing and distribution of this document under cooperative agreement NU58DP007092 awarded to MA. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of CDC.

MASSACHUSETTS
Comprehensive Cancer Coalition

Massachusetts Comprehensive
Cancer Coalition

For more information, visit
mass.gov/MCCC