District of Columbia
Cancer Control Plan

2022-2026

DC | HEALTH
GOVERNMENT OF THE DISTRICT OF COLUMBIA

WE ARE WASHINGTON
GOVERNMENT OF THE
DISTRICT OF COLUMBIA
DC **MURIEL BOWSER, MAYOR**

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Dear District of Columbia Residents and Partners:

I am pleased to share with you the DC Cancer Control Plan 2022-2026, our community's shared framework of goals and objectives to address the cancer burden in the District of Columbia. With this plan, we seek to engage a broad spectrum of stakeholders, community partners, neighborhoods, and residents, to implement strategies, achieve goals, and evaluate progress towards a cancer-free DC.

Over the past decade (2008-2018) we have seen reductions in overall cancer incidence (from 497 to 417.3 per 100,000 individuals) and mortality (from 202 to 155.6 per 100,000 individuals) (DC Cancer Registry, 2021) & (DC Vital Records, 2022). While we celebrate that progress, we recognize those improvements have not been shared among all DC residents. Our most vulnerable populations remain at higher risk of developing and dying from cancer. Breast cancer mortality rates are highest among African American women, and colorectal and prostate cancer mortality rates are highest among African American men. In addition, residents of Wards 1, 7, and 8 suffer from the highest cancer incidence and Ward 8 has the highest mortality rates. This plan is designed to address these health inequities by promoting clinical care best practices, evidence-based community-based interventions, and strategies to support healthy behaviors.

DC's Cancer Control Plan is a call to action! It sets clear goals, objectives and strategies across the cancer continuum from prevention, screening and early detection, to treatment and survivorship. The plan also addresses the associated modifiable risk factors for cancer, including obesity, alcohol use, tobacco use, and nutrition. This is not a static document. Instead, it is a guide for everyone to engage in to reduce the burden of cancer in our community. The work being done in DC is not done in isolation. Promoted throughout this plan are opportunities that leverage current public and private investments in health initiatives to achieve shared goals.

Improving cancer outcomes and reducing the burden of cancer in DC while proactively pursuing health equity is essential to achieving our vision of making Washington, DC the healthiest city in America.

I encourage all stakeholders to participate in the implementation of the plan's strategies and the ongoing evaluation of our progress.

Sincerely,

Sharon Lewis, DHA, RN-BC, CPM
Interim Director of DC Health

HOW TO USE THE CANCER CONTROL PLAN

The DC Cancer Control Plan 2022-2026 is designed to encourage collaboration and cohesiveness among stakeholders to work together to reduce the burden of cancer in DC. Collectively, the goals, objectives, and strategies are far-reaching and complex. No single organization can carry out all of these activities. This plan is a call to action to every organization and individual involved in any aspect of cancer prevention and control to address one or more of the objectives and to apply the appropriate strategies and resources as opportunities arise.

The Cancer Control Plan is intended to be used by clinicians, health systems, public health professionals, business professionals, government agencies and elected officials, academia, nonprofit and advocacy organizations, survivors, and community activists. These strategies can be tailored to many settings to help guide cancer control initiatives.

Often, the most effective initiatives engage multi-sector partners. Collaborative effort has the potential to raise awareness, reach broader populations, and more effectively leverage public and private investments already in place. The impact of our collective efforts can be further amplified by adopting the comprehensive approach of addressing public health through policy, systems, and environmental change.

For more specific ideas on ways your organization can contribute to the cancer control effort, review the 'How to Use the Cancer Plan' chart.

EXECUTIVE SUMMARY

Cancer is the second leading cause of death in DC and significantly impacts the social and economic well-being of the community. African American residents bear a disproportionate burden of cancer compared to other racial and ethnic groups. For example, the breast cancer mortality rate is over two times higher for African-American women than for white women (36.3 versus 15.1 per 100,000). The lung cancer incidence rate is almost four times higher for African Americans than their white counterparts and the mortality rate is two times higher among African Americans than whites (DC Cancer Registry, 2021). Collective action is needed to address this burden. The DC Cancer Control Plan is a data-driven, outcome-oriented roadmap for stakeholders to reduce cancer incidence and mortality, eliminate disparities and improve the health and quality of life of all DC residents.

DC Health has outlined measurable objectives relevant to reducing this burden. These objectives are aligned with the forthcoming *Healthy DC 2030* and are supported by evidence-based strategies and best practices. Each projected target is calculated through analysis of baseline data and considers current data trends.

The objectives outlined in this plan are also aligned with *Cancer Free DC*, an innovative initiative focused on cancer prevention. This comprehensive initiative aims to reduce the incidence, mortality, and burden associated with preventable cancers by leveraging data and surveillance infrastructure, health systems change, community engagement, mass media, and treatment.

The strategies included in the plan are proven approaches that fall within four key domains:
(1) **epidemiology and surveillance;**
(2) **environmental approaches;**
(3) **health care system interventions and;**
(4) **community programs linked to clinical services. Health equity is a cross-cutting theme for all strategies and should be considered in the development of all initiatives.**

The COVID-19 pandemic has highlighted the various inequities that contribute to the disproportionate burden of disease on marginalized communities. Disparities with respect to care, access, and treatment have been exacerbated across the nation, as well as here in DC. It is possible that the morbidity and mortality of various chronic conditions, including cancer, will rise over the next few years as a result of reduced access to screening and routine care services brought on by the unprecedented pandemic. Thus, it is even more critical, at this current juncture, to have a specific course of action to address the significant negative impact of the pandemic on cancer care—from prevention, screening and diagnosis through survivorship.

Anyone in the community can affect positive change in this endeavor and we encourage everyone to become active in the plan's implementation. **Goals** within the DC Cancer Control Plan 2022-2026 are based on an assessment of the cancer burden in DC and the best opportunities to affect the greatest change in health outcomes. The plan focuses on the critical needs of the community and the opportunity for the greatest impact.

Objectives in the Cancer Plan are specific, measurable, attainable, relevant, and time-bound (SMART); they are based on available measurable data sources.

Strategies in the plan are evidence-based and incorporate policy, systems, and environmental changes that will impact populations rather than simply individuals.

THE CANCER BURDEN IN DC

Cancer Incidence and Mortality

Cancer is the second leading cause of death in the District of Columbia and significantly impacts the social and economic well-being of the community. In 2018, there were 2,881 new cases of cancer and 1,070 people who died of cancer.

The four most frequently diagnosed cancers during 2018 were female breast, prostate, lung and bronchus, and colon and rectum cancers, which comprise 52% of all cancer incidence and 71% of the top ten cancer incidents. Similarly, the four leading causes of cancer deaths during 2018 included prostate, female breast, lung and bronchus, and pancreas cancers.

Top 10 Cancer Incidence Rates 2018

Cancer	Rate
Female Breast	139.5
Prostate	133
Lung and Bronchus	44.2
Colon and Rectum	38.3
Corpus and Uterus NOS	27.4
Pancreas	16.1
Non-Hodgkin Lymphoma	15.3
Urinary Bladder	13.8
Liver and Intrahepatic Bile Duct	13.5
Kidney and Renal Pelvis	13
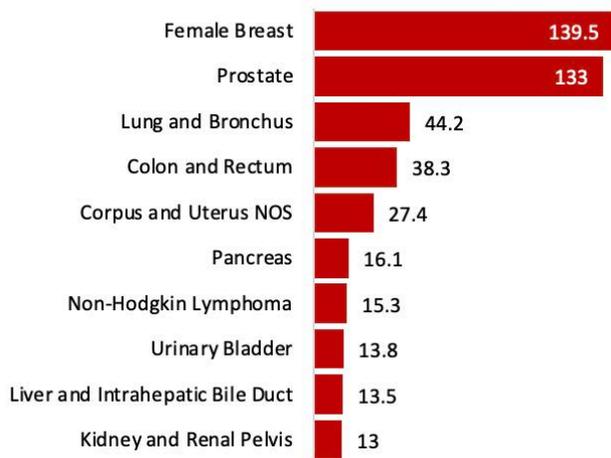
Top 10 Cancer Deaths 2018

Cancer	Rate
Prostate	32.8
Female Breast	27.1
Lung and Bronchus	24.7
Pancreas	15.9
Colon and Rectum	12.4
Corpus and Uterus NOS	9.6
Liver and Intrahepatic Bile Duct	8.1
Ovary	6.9
Myeloma	4.7
Stomach	4.5
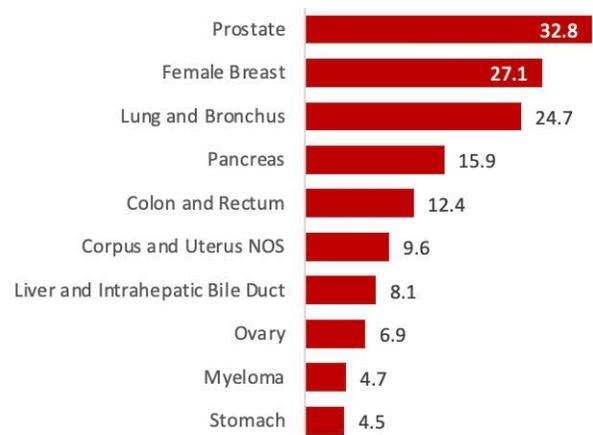
Figure 1: Top 10 Cancers-Incidence and Mortality, 2018 (DCCR, 2018)

Cancer incidence rates declined by 13% in the District of Columbia from 496.6 new cases per 100,000 individuals in 2008 to 417.3 new cases per 100,000 individuals in 2018. Similarly, cancer mortality rates declined by 24% over the same time period (201.8 vs 155.6 per 100,000 individuals).

10 Year Cancer Incidence and Mortality Rate

Year	Incidence	Mortality
2008	497	202
2009	498	197
2010	505	178
2011	528	180
2012	496	177
2013	459	175
2014	457	175
2015	416	163
2016	403	156
2017	430	153
2018	417	156

Incidence ◼ Mortality ◼ Linear (Incidence) ⋯⋯ Linear (Mortality)
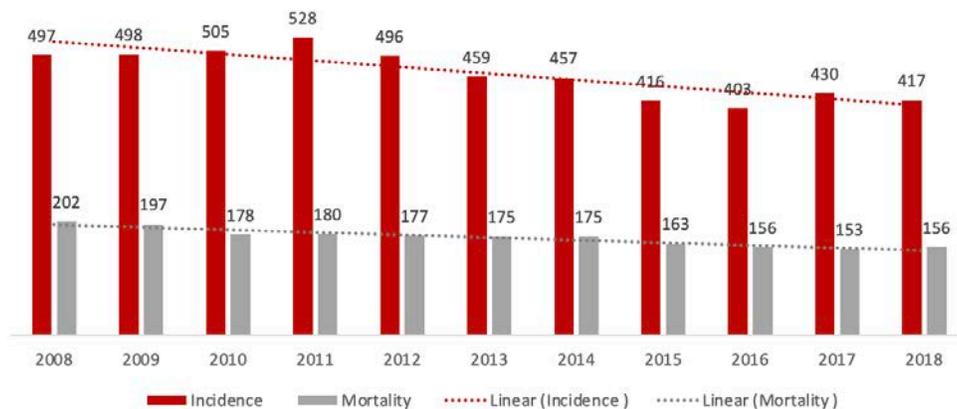
Figure 2: 10-Year Cancer Incidence and Mortality Rates (DCCR, 2018)

Geographic Cancer Disparities

From 2014-2018, Ward 8 reported the highest cancer incidence rate in DC: 453 cases per 100,000 (Figure 3). The lowest incidence was observed in Ward 3 where 379 new cases were diagnosed per 100,000 individuals during the same time period (DC Vital Records, 2022). Despite overall declines in incidence and mortality rates across DC, disparities persist by race. During 2018, the overall cancer incidence rate was 21.5% higher among African Americans than Whites (446.8 cases per 100,000 for African Americans versus 359.9 cases per 100,000 for Whites) (DC Vital Records, 2022) (Figure 3).

Similar to incidence, mortality from cancer was also highest in Ward 8 and lowest in Ward 3 during 2014-2018 (Figure 4). The mortality rate for Ward 8 was 249 deaths per 100,000 individuals, compared to 106 deaths per 100,000 individuals for Ward 3 (Figure 4).

Despite an overall decline in cancer mortality from 2008-2018, disparities persist for African Americans and males. During 2018, cancer mortality was almost 2 times higher for African Americans compared to Whites, with rates of 195.0 deaths per 100,000 and 102.3 deaths per 100,000 among African Americans and Whites, respectively (Figure 5). The mortality rate among males was 27% higher compared to females (DC Vital Records, 2021).

Ward 8	453.4
Ward 7	451.4
Ward 1	450.7
Ward 5	436.1
Ward 2	418.6
Ward 6	416.9
Ward 4	404.0
Ward 3	379.1

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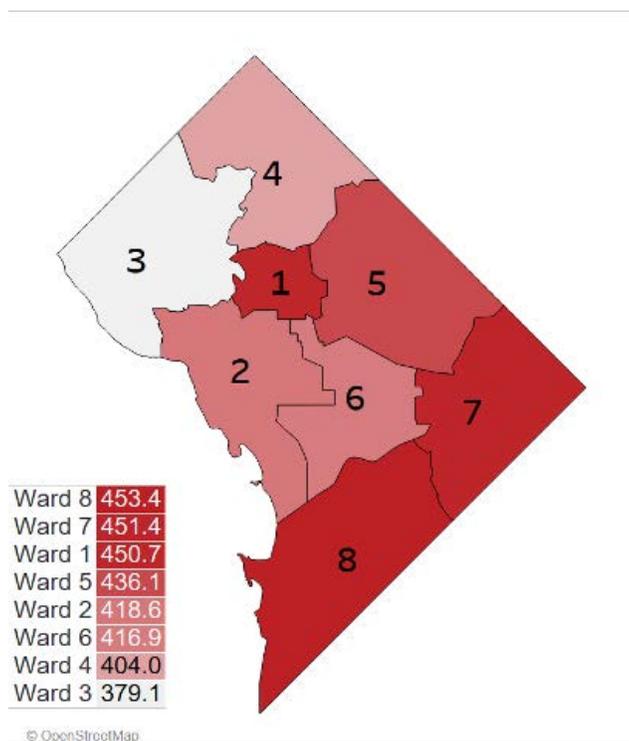
Figure 3: 2014-2018 Five Year Average Cancer Incidence Rates by Ward (DCCR, 2018)

Ward 8	248.9
Ward 7	206.6
Ward 5	191.7
Ward 1	172.3
Ward 6	166.0
Ward 4	153.5
Ward 2	122.9
Ward 3	105.6

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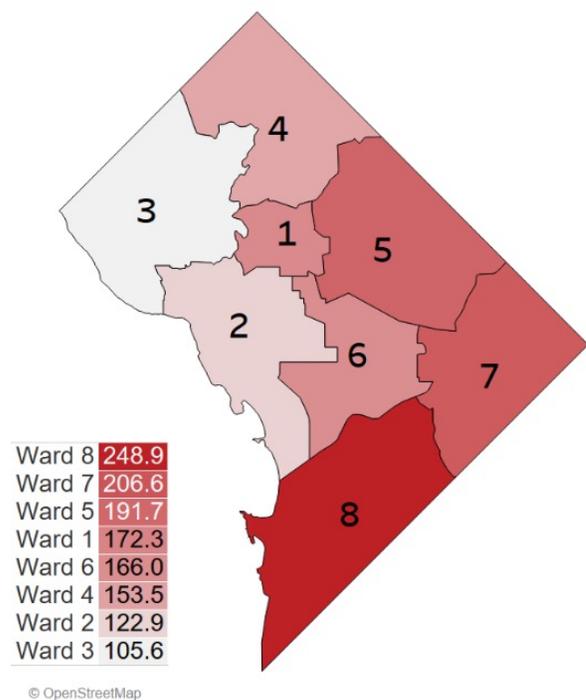
Figure 4: 2014-2018 Five Year Average Cancer Mortality Rates by Ward (DCCR, 2018)
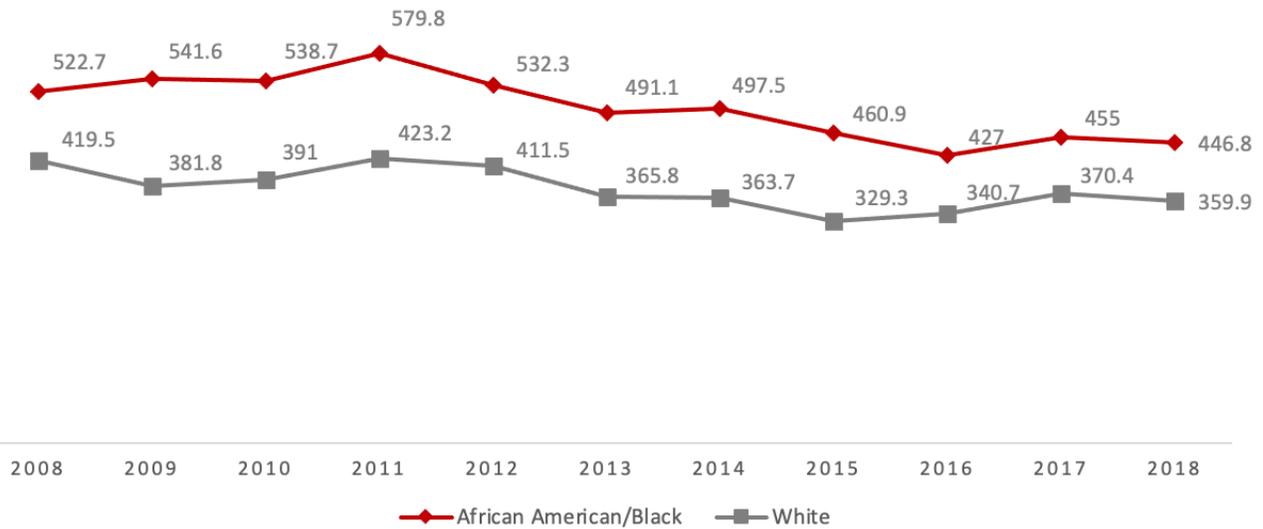
Figure 5: Ten Year Trend in Cancer Incidence by Race (2008-2018) (DCCR, 2018)
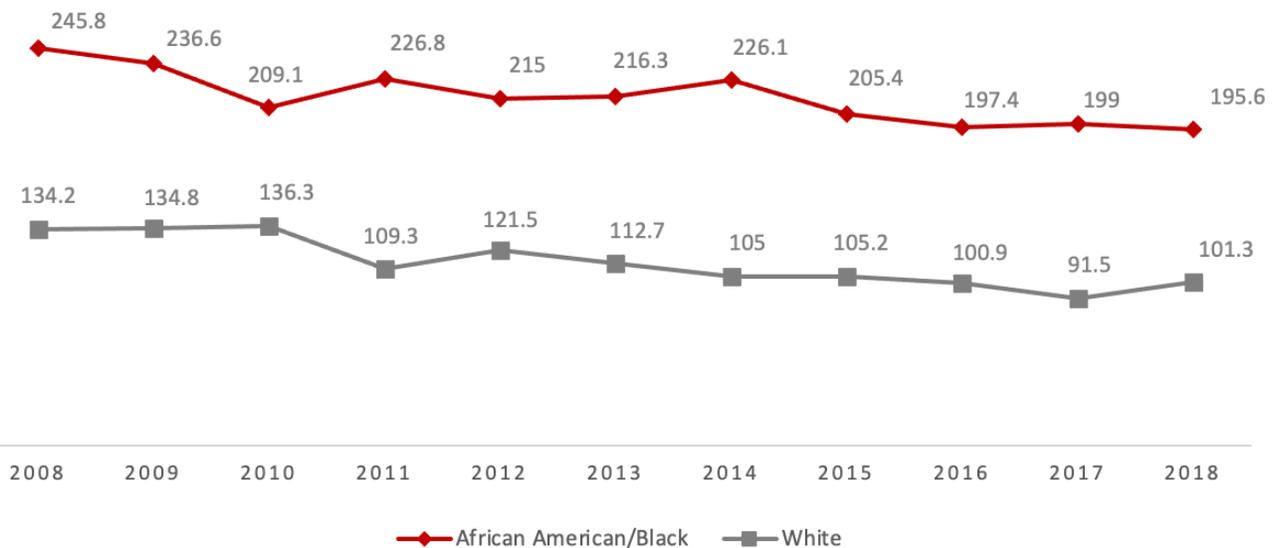
Figure 6: Ten Year Trend in Cancer Mortality by Race (2008-2018) (DCCR, 2018)

Despite progress in reducing overall cancer incidence and mortality rates, geographic and demographic disparities persist (Figure 3, Figure 4, Figure 5 & Figure 6). Not all residents have benefited from improvements in screening and treatment of cancer. Not all residents have the same opportunities to pursue the healthy behaviors that reduce risk for many cancers as well as other chronic diseases. These data have driven the development of the Plan and informed the selection of evidence-based interventions to reduce the disparities prevalent in our community.

For a comprehensive look at cancer incidence and mortality trends in DC, refer to the DC Cancer Burden Report (DC Health, 2014).

HEALTH EQUITY

Health equity is described by the Centers for Disease Control and Prevention as "the attainment of the highest level of health for all people" (CDC, 2020). Unfortunately, socio-economic and environmental barriers, known as social determinants of health (SDOH) deny many people the opportunity to practice healthy behaviors and access quality health-related services. The resulting health disparities, preventable differences in opportunity and health outcomes between segments of the population, place a greater cancer burden on the most vulnerable DC residents.

Social Determinants of Health

Health is determined by a variety of interrelated factors (Figure 7). While clinical care is a critical component, it is not sufficient alone to provide desirable health outcomes. It is estimated that clinical care drives only 20% of the population's health outcomes, with the remaining 80% being driven by health behaviors (30%), social and economic factors (40%), and the physical environments in which a person is born, lives, plays, and works (10%) (Remington, 2015).
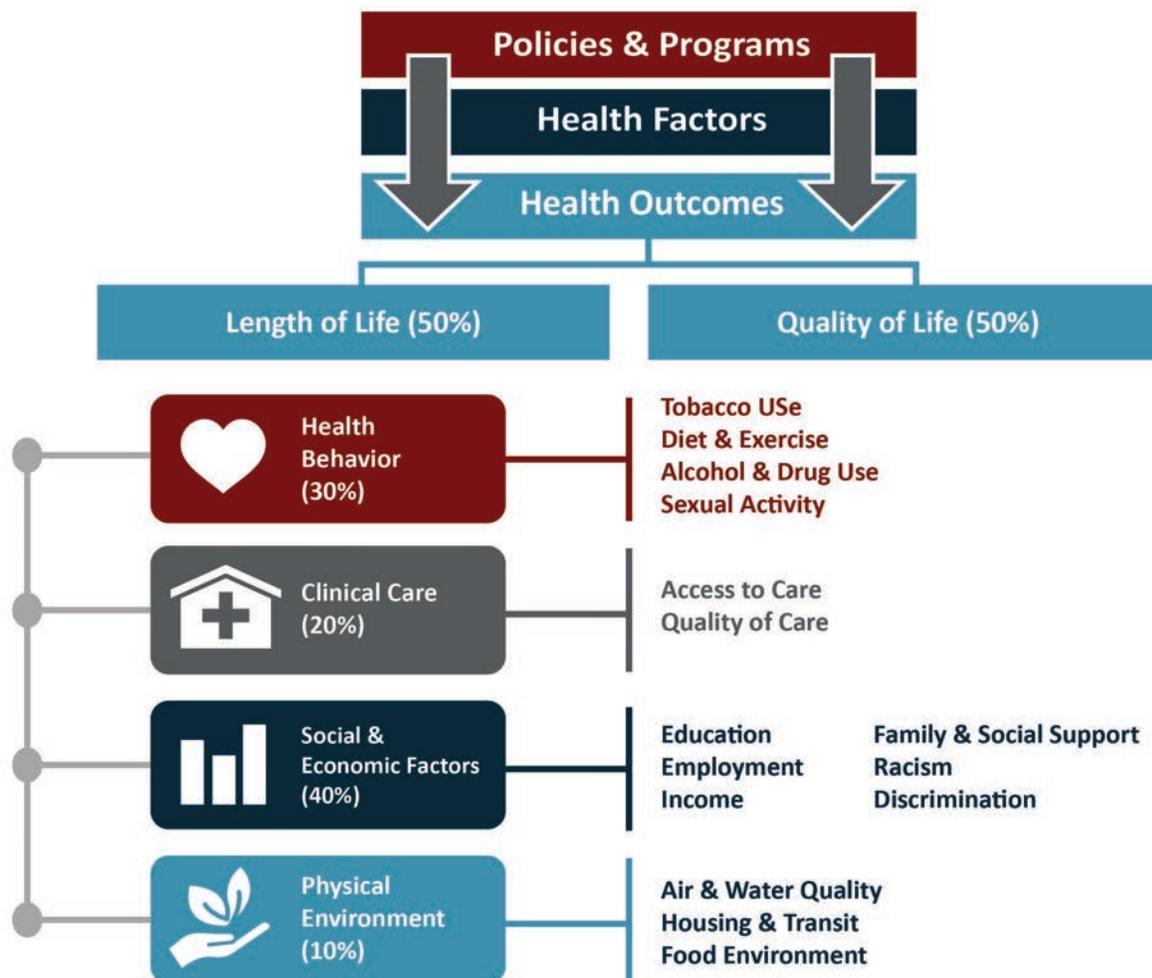
Figure 7: Social Determinants of Health (Graphic Adapted from County Health Rankings Model-2014)

Health behaviors – such as choosing whether or not to smoke, eat healthy foods, or engage in physical activity – are affected and influenced by social and economic factors and physical environments (Health Equity Summary Report, 2018).

DC Health identifies nine key social determinants of health operating in DC: education, employment, income, housing, transportation, food environment, medical care, outdoor environment, and community safety. Racism drives these disparities by structuring opportunity and assigning value based on how a person looks. This creates a system, often referred to as "structural racism," that unfairly advantages some while unfairly disadvantaging others (American Public Health Association). In developing the Cancer Plan, the objectives and strategies were selected based on their probability to improve health outcomes by addressing the multi-level factors, noted below, that affect health.

Cultural Competency

Though cancer rates have decreased in DC overall, cancer incidence and mortality rates continue to be higher among Black/African American residents as compared to their White counterparts. This underscores the need for better understanding of barriers created by cultural differences and how to respond effectively and compassionately.

Cultural competency is the ability to deliver health care services that meet the social, cultural, and linguistic needs of a patient (Health Policy Institute). Providing culturally competent care, an important component of eliminating racial and ethnic health disparities, includes use of interpreter services and community health workers, coordination with traditional healers, inclusion of family and community members in health care decision-making, and training to increase cultural awareness among all clinic and hospital staff (Fortier et al, 1999).

Implicit Bias and Racial Equity

Implicit bias is the unconscious 'attitudes or stereotypes that affect our understanding, actions, and decisions in an unconscious manner' (Kirwan Institute for the Study of Race & Ethnicity, n.d.) Studies have shown that health care providers' perceptions and attitudes towards patients are influenced by a range of factors including race, ethnicity, and gender (Institute of Medicine, 2003). These biases can affect the patient-provider interaction and impact the treatment a patient receives (Chapman et al, 2013). African American and Hispanic patients are less likely to receive appropriate therapies compared to their White counterparts and their symptoms are perceived as less severe. The effects of implicit bias extend beyond diagnosis and treatment. It also impacts patient-provider communication as well as a population's perception of the health care system (Chapman et al, 2013). Studies have shown that oncologists' implicit racial bias was associated with shorter, less patient-centered, and less supportive interactions with patients. In addition, high implicit bias among Oncologists indirectly predicted less patient confidence in recommended treatments, greater perceived difficulty in completing treatment, and more patient difficulty remembering contents of the interaction (Penner et al, 2016). The persistence of bias throughout the healthcare system will continue to perpetuate healthcare disparities and thus specific strategies must be taken to ensure the most vulnerable populations receive consistent quality care.

Racial equity is achieved when race no longer predicts social or health outcomes. Aiming toward racial equity requires an intentional focus on health disparities, implicit bias, structural racism and health equity. Through this plan, DC Health will continue to prioritize cultural competency and implicit bias training for staff and providers within DC's health care systems.

Sexual Orientation & Gender Identity

The lesbian, gay, bisexual, transgender, and queer/questioning (LGBTQ+) community is a medically underserved population with poorer health outcomes overall than those who identify as heterosexual and/or cisgender. Because DC is reported to be home to a large percentage of residents who identify as LGBTQ (9.8%), it is critical to create initiatives tailored to their specific needs and concerns (Quinn, et al., 2015).

There are limited cancer research studies and/or materials dedicated to LGBTQ+ populations. Of the few published studies, research shows limited access to health care among sexual minorities as a result of lack of insurance, challenges finding providers with knowledge and/or lack of biases, and lower incomes. DC Health has formed a specific LGBTQ workgroup, consisting of internal and external partners with subject matter expertise in LGBTQ issues, statistics, and epidemiology. The workgroup has prioritized conducting a series of focus groups to assess the health needs of the LGBTQ population in DC. Key findings and a formal report are expected to be available in 2022.

Comorbidities

Comorbidities, the presence of other health issues and chronic conditions, at the time of cancer diagnosis can affect both treatment decisions and health outcomes. Cancer and many chronic diseases such as cardiovascular disease, diabetes, and obesity co-exist in many cases because they share the same risk factors (i.e., increasing age, smoking, poor diet, lack of exercise). Addressing and guiding patients to manage their chronic comorbidities, which are mediated by the same SDOH as cancer, is critical to improving health outcomes. DC Health supports programs to address barriers to chronic disease management, cancer screening and treatment at the individual, provider, and organization level. DC Health's programs/initiatives include:

DC Health's Tobacco Control Programs' *DCQuitNow* provides no-cost cessation support services to any DC resident who needs help quitting tobacco. *DCQuitNow* supports tobacco cessation attempts through evidence-based interventions, offering a broad range of options for participants to engage and receive cessation support. In addition to phone counseling, *DCQuitNow* offers live text or chat sessions with a Quit Coach, online group video sessions, up to 12 weeks of nicotine replacement therapy (NRT), online courses, and artificial intelligence-based text messaging support. These features facilitate a milestone-based digital journey that keeps participants engaged in the quitting process through individually tailored strategies. Services are offered in both English and Spanish.

DC Health's *Living Well Self-Management Workshops,* an evidence-based program, provides DC residents with the tools and confidence necessary to manage their chronic conditions, including but not limited to cancer, diabetes, heart disease, chronic pain, and depression. One of the workshop series within this program, *Cancer: Thriving and Surviving*, specifically equips cancer survivors and their caregivers with the educational and emotional support needed to continue normal daily activities. It provides a safe space for individuals to discuss their fears and frustrations while working together to develop weekly action plans and strategies to solve problems they may encounter while managing their conditions.

The District provides nutrition and food security programs such as the *Supplemental Nutrition Assistance Program Education (SNAP-Ed) and the WIC Farmer's Market Nutrition Program*. Through partnerships with the University of the District of Columbia's Center for Nutrition Diet & Health and Center for Urban Agriculture & Gardening Education, adults and seniors living in DC can participate in research-based nutrition and health programs as well as garden-based education with hands-on activities in community gardens.

The Multi-Component Obesity Prevention in Targeted Settings (MCOPITS) program supports the implementation of programs, organizational policies, and guidelines in three intervention areas: a) increase access to healthy food and beverages b) increase physical activity access and outreach c) increase referrals and access to evidence-based lifestyle change programs. Programs focus on DC adults aged 18 and older who are overweight and/or at risk for diabetes or heart disease.

DC Health's *Primary Care Office* works to ensure that every resident in the District of Columbia has access to equitable, comprehensive, quality health care services. Since its inception, the DC PCO has invested in the Health Professional Loan Repayment Program (HPLRP), innovative health care transformation and quality improvement projects, and support to build and renovate seven health care facilities, including two hospitals to improve access to care and care utilization.

Access to Optimal Treatment Protocols

Quality cancer care is necessary to reduce mortality rates in DC, but accessing that care depends on cost, travel, provider recommendations, insurance coverage, and available providers. For vulnerable and at-risk populations, these barriers pose significant challenges to receiving optimal care. DC Health's comprehensive patient navigation program aims to address barriers to accessing quality cancer care in clinics serving residents in Wards with high cancer mortality rates (Wards 5, 7, and 8). Patient navigators play an active role in identifying residents who are experiencing barriers to completion of cancer screening or diagnostic procedures and conducting barrier assessments to identify systemic, socio-cultural barriers to care. They connect patients with the resources needed to overcome these barriers and provide a range of services including appointment scheduling and reminders; transportation services; language translation; insurance counseling; financial counseling; health education; referrals to community services (housing, domestic violence shelters, emergency shelters, food banks); and referrals to genetic counseling and tobacco cessation services. Patient navigators are integral in eliminating and addressing barriers to care faced by populations experiencing health inequities.

Policy, Systems & Environmental Change

The Cancer Plan's strategies include those built on a policy, systems, and environmental change (PSEC) framework (Figure 8). PSEC modifies a community's physical surroundings to support healthy lifestyle choices. This model incorporates "health in all policies" by affecting policy not typically thought of as health-related, such as zoning, housing, taxes, transportation, etc. This "health in all policies" approach is critical to achieving health equity by addressing the social determinants of health that cause these disparities. Policy change interventions create or amend laws, ordinances, resolutions, mandates, regulations, or rules. These could be legislative policies or business and organizational policies. Systems change interventions impact all elements of an organization, institution, or system. Environmental change interventions involve material or structural changes to economic, social, or physical settings.

A PSEC initiative can be used to improve cancer screening rates (see Figure 8 below). As illustrated, the combination of mandated cancer screening, health plan wellness program and extended clinical hours lead to improved health outcomes.

Strategies outlined in this plan include a P, S, or E to indicate the area addressed.
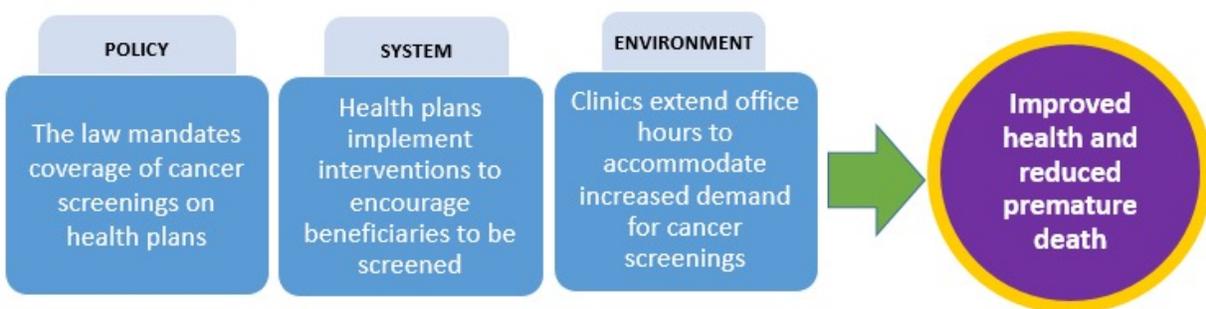
Figure 8: DC Health Policy Systems and Environmental Change Framework

PREVENTION/RISK REDUCTION
Prevent cancer from occurring or reoccurring

Cancer prevention is any action or measure taken by a community or an individual to reduce the risk of disease. Some risk factors – the characteristics or exposures that increase the likelihood of developing cancer – can be controlled while others cannot. Increasing age, family history, and genetics are risk factors that cannot be changed. Modifiable risk factors for cancer include tobacco use, nutrition, exercise, weight, alcohol use, and preventive vaccinations. **As many as 4 in 10 cancers and nearly half of cancer-related deaths are preventable as they are linked to modifiable risk factors (American Cancer Society, 2017).** The goals and objectives throughout this section are designed to address an individual's health behaviors as well as mitigate modifiable risk factors that persist and the policy, systems, and environmental level changes, to ultimately prevent cancer from occurring or reoccurring (National Institutes of Health, 2017).

GOAL 1: Improve Nutrition & Physical Activity among all DC Residents
Overweight and obesity are leading modifiable risk factors for cancer. Research shows that excess fat surrounding vital organs causes long-term inflammation that damages body processes which are linked to an increased risk of various cancers including: breast, colon and rectum, endometrium, esophagus, kidney and pancreas (National Institutes of Health, 2017). DC's Behavioral Risk Factor Surveillance (BRFSS) reports that the *prevalence of adult obesity (a Body Mass Index of 30.0 - 99.8) was 24.3%, one of the lowest in the nation, however disparities exist by race and ethnicity, socioeconomic status, and geographic location (2020).*
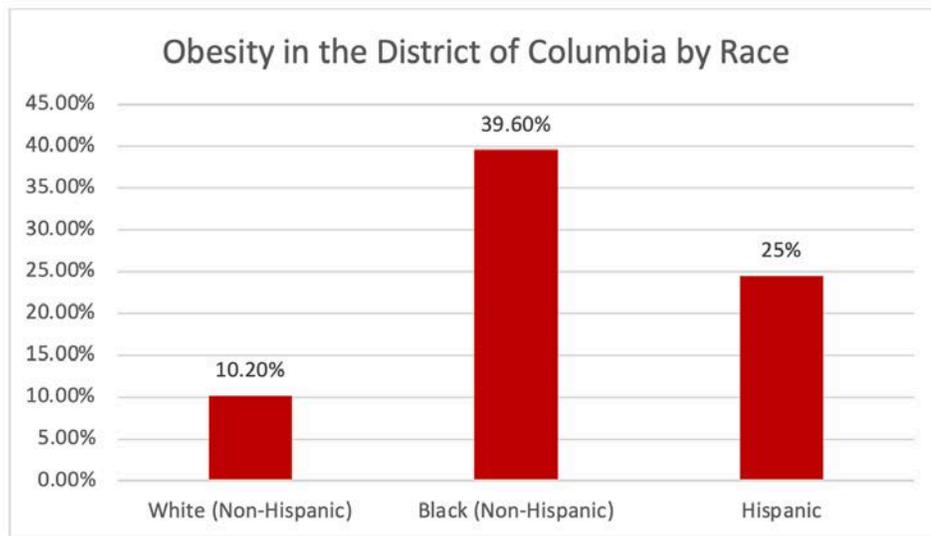
Figure 9: Obesity in the District of Columbia by Race (CDC BRFSS, 2019)

As mentioned in Figure 9, 10.2% of District adults who are obese are non-Hispanic White residents, 39.6% are Non-Hispanic Black, 25% are Hispanic. Similarly, adult obesity among those earning $75,000 or more was approximately 16%, but was 40% for those earning less than $35,000 annually. Adult residents in Ward 7 and 8 had the highest prevalence of obesity (44% and 41%, respectively), followed by Ward 5 (30%) and Ward 6 (25%) and the lowest prevalence in Ward 2 (CDC BRFSS, 2019). Younger children ages 2-4 who are WIC participants had a lower prevalence (13%), 36th lowest among all states.

1A. Adults

<div align="center">

Objectives **Measures**

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		Baseline (Year)	Target (2026)
1.1	Increase fruit consumption among adults to more than one per day. (Data Source: BRFSS)	64.4% (2019)	68.7%
1.2	Increase vegetable consumption among adults to more than one per day. (Data Source: BRFSS)	83.5% (2019)	87.5%
1.3	Decrease number of USDA-defined food deserts: residents reporting low-income and low-access to healthy food options and live more than 1 mile from the nearest supermarket. (Data Source: USDA)	12 (2019)	6
1.4	Decrease the proportion of adults who are considered obese (BMI ≥ 30). (Data Source: BRFSS)	24% (2019)	20.1%
1.5	Increase the percentage of adults reporting physical activity within the previous 30 days. (Data Source: BRFSS)	81% (2019)	85.6%

STRATEGIES
- Advocate for policies that increase access to healthy foods, such as through farmers' markets, grocery stores, and community and home gardens and reduce the over-abundance of unhealthy foods. (PE)
- Improve available healthy food options in existing small stores – encouraging produce and minimally processed foods. (PE)
- Support infrastructure for physical activity. (PE)
- Advocate for built environments – such as enhance pedestrian walkways and bike paths – that encourage active transport. (PE)
- Improve neighborhood walkability scores through policies that address safety and infrastructure. (PE)
- Implement worksite wellness programs and policies such as active meetings, healthy vending/menu options, improved stairway access. (PE)
- Implement healthy food and beverage marketing strategy (i.e. pricing healthier foods and beverages at a lower cost)
- Implement healthy eating learning opportunities such as nutrition education and other strategies that give residents knowledge and skills to help choose and consume healthier foods and beverages. (SE)
- Implement organizational physical activity policies, such as active/walking meetings, offering physical activity and/or active commuting as a covered benefit to employees, and offering free access to evidence-based physical activity programs. (PSE)
- Increase the use of electronic health records for screening, testing, and referrals for patients with, or at risk of chronic disease into CDC-Recognized evidence-based lifestyle change programs such as the National Diabetes Prevention Program and evidence-based physical activity programs such as Walk with Ease to prevent or manage chronic conditions.

1B. Youth

Objectives		Measures	
		Baseline (Year)	Target (2026)
1.6	Decrease percentage of high schoolers who are obese. (Data Source: YRBS)	17.1% (2019)	13.5%
1.7	Increase the percentage of high schoolers who report physical activity at least 60 minutes per day on five or more of the past seven days. (Data Source: YRBS)	28% (2019)	32.6%
1.8	Increase percentage of middle schoolers who report physical activity at least 60 minutes per day on five or more of the past seven days. (Data Source: YRBS)	42.9% (2019)	48%

STRATEGIES

- Advocate for policies that increase access to healthy foods, such as through farmers' markets, grocery stores, and community and home gardens, and reduce the over-abundance of unhealthy foods. (PE)
- Improve available healthy food options in existing small stores – encouraging produce and minimally processed foods. (PE)
- Support infrastructure for physical activity. (PE)
- Advocate for built environments – such as enhanced pedestrian walkways and bike paths – that encourage active transport. (PE)
- Improve neighborhood walkability scores through policies that address safety and infrastructure. (PE)
- Facilitate a multi-land use policy to provide access to school facilities for physical activity. (PSE)
- Review and suggest changes to the school breakfast/lunch initiatives as needed. (PSE)
- Advocate for recess and physical education programs in all schools. (PSE)

GOAL 2: Reduce Tobacco Use Prevalence and Consumption

Tobacco use remains the number one preventable cause of cancer in the United States. Not only is it the leading cause of lung cancer, but it is also linked to cancers of the larynx, mouth, esophagus, throat, bladder, kidney, liver, cervix, and colon and rectum and acute myeloid leukemia. Even those who do not use tobacco are at risk through secondhand and third hand smoke. The effects of both can cause not only cancer but also coronary heart disease, stroke, increased risk of heart attack, sudden infant death syndrome, and asthma (CDC, 2020). In 2019, 12.7% of adults in DC reported smoking every day or some days. Non-Hispanic Whites were less likely to smoke (6.9%) than non-Hispanic Blacks (20.4%) and those who identified as non-Hispanic other (13.6%) (CDC BRFSS, 2019). Adults in Ward 7 and 8 reported the highest percentage of smoking at 23.8%, followed by Ward 4 (10.4%) and Ward 6 (10.3%). Ward 3 reported the lowest percentage of smokers (6.0%) (CDC BRFSS, 2019).

Objectives   Measures

		Baseline (Year)	Target (2026)
2.1	Decrease the percentage of adults who are current smokers. (Data Source: DC BRFSS)	12.7% (2019)	8.3%
2.2	Decrease percentage of Black/African American and Hispanic adults who are current smokers (Data Source: DC BRFSS)	Black/African American: 20.4% Hispanic: 7.8% (2018-2019)	AA: 14.3% His 5.1%
2.3	Decrease percentage of current smokers among middle and high school students (Data Source: YRBS)	MS - 2.5% HS - 0 (2019)	1.5%
2.4	Decrease the percentage of middle and high school students who report use of e-cigarettes and other vape products (Data Source: YRBS)	MS - 5.3% HS – 13% (2019)	HS – 3%

STRATEGIES

- Expand implementation of evidence-based tobacco use assessment and treatment (such as the 5As or Ask-Advise-Connect) in the clinical setting. (PS)
- Promote community-clinical linkages to increase access to tobacco cessation resources such as DC Quitline. (PS)
- Encourage organizations, businesses, and government agencies to promote DC Quitline to their constituents. (PSE)
- Develop and implement culturally appropriate mass-media messaging to decrease tobacco acceptability, particularly among Black/African American and Hispanic adults and cancer survivors. (E)
- Promote and support mass media campaigns such as CDC's Tips For Former Smokers and local media initiatives. (E)
- Raise awareness among parents, school officials, coaches, and mentors on the dangers of electronic nicotine delivery systems (ENDS) such as e-cigarettes and other emerging tobacco products. (E)
- Engage youth to lead peer-focused prevention and cessation activities.
- Advocate for enforcement of tobacco regulations including purchase age restrictions, the ban on the sale of all flavored tobacco products (including menthol and mint), and smoke-free places. (PSE)
- Limit the number of outlets where tobacco products are sold and exemptions for sites in which smoking is permitted.
- Engage non-traditional partners to support tobacco control activities. (SE)
- Promote employer place-based interventions such as tobacco-free spaces and access to cessation resources. (PSE)

GOAL 3: Reduce Alcohol Consumption

As many as 70% of Americans are not aware that alcohol causes cancer (CDC BRFSS, 2019). Yet alcohol is linked to cancers of the esophagus, head and neck, liver, breast, colon and rectum. The District of Columbia has the highest age-adjusted rates of current alcohol consumption (last 30-days) and binge drinking among States in the United States. In the District 68.6% of people ages 18 and older reported that they drank alcohol in the past month (by Ward: 71% in Ward 1, 84% in Ward 2, 85% in Ward 3, 66% in Ward 4, 62% in Ward 5, 71% in Ward 6, 58% in Ward 7, 56% in Ward 8). The age-adjusted rate among adult DC residents that identified as binge drinkers was 24%. These residents are likely to be male, white, and between the age of 25-34. Ward 2 had the highest percentage of binge drinkers with 28%, followed by Ward 6 (25%) and Ward 8 (24%) (CDC BRFSS, 2019). Ward 3 and 4 reported the lowest percentage of binge drinkers (both Ward 3 and 4, 19%) (CDC BRFSS, 2019).

Objectives   Measures

		Baseline (Year)	Target (2026)
3.1	Decrease the proportion of high schoolers reporting use of alcohol during the past 30 days. (Data Source: YRBS)	29.2% (2019)	24.6%
3.2	Decrease the proportion of adults aged 19 years and older who are heavy drinkers (14+drinks per week for men; 7+ drinks per week for women). (Data Source: BRFSS)	8.3% (2019)	6.1%
3.3	Decrease the proportion of adults aged 19 years and older who are binge drinkers (5+ drinks on one occasion for men; 4+ drinks on one occasion for women). (Data Source: BRFSS)	23.9% (2019)	18.7%

STRATEGIES

- Educate the public on the link between alcohol and cancer risk, the importance of screening for alcohol misuse, and interventions to reduce alcohol misuse. (S)
- Provide alcohol screening and brief interventions in clinical settings. (PS)
- Leverage partnerships among schools, healthcare providers, faith-based groups, and other community organizations to implement prevention and reduction efforts aimed at underage drinking. (SE)
- Support policies that limit the number of alcohol outlets and discourage use, such as alcohol taxes. (PE)

GOAL 4: Prevent HPV Infections

The human papillomavirus (HPV) is a common virus affecting both men and women, but most people will never know they have it. HPV is the leading cause of cervical cancer in women, but is also linked to vulvar, vaginal, penile, anal cancers, and cancers of the mouth and throat (American Cancer Society, 2020). The HPV vaccine can prevent cancers associated with the virus. Vaccination is recommended for both girls and boys between 9- 12 years of age before they are exposed to the virus (American Cancer Society, 2020).

<div align="center">

Objectives   **Measures**

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		Baseline (Year)	Target (2026)
4.1	Increase up-to-date vaccination coverage for the human papillomavirus (HPV) of adolescents age 13 to 17 years. (Data Source: National Immunization Survey)	29.2% (2019)	24.6%

STRATEGIES

- Implement a combination of interventions, such as an educational campaign paired with adolescent trainings to increase community demand and enhance access to vaccination services. (PSE)
- Utilize assessment and feedback (IQIP) interventions to identify missed opportunities for vaccination. (S)
- Promote a combination of practice-focused strategies – such as clinic-based client education, client reminder and recall systems, provider reminders, and standing orders – to increase HPV vaccination rates, particularly in targeted populations. (S)
- Promote school-based health education and awareness through school-based health centers, DC Health Youth Advisory Council and peer-to peer messaging (visual aids/posters). (S)

GOAL 5: Prevent Liver Cancers Related to Hepatitis C Infections

Hepatitis C, a leading cause of liver cancer, is most common among persons born between 1945 and 1965 and those who use IV drugs. Persons of Asian, Pacific Islander or African descent are also at increased risk. In 2018, in the District, there were 2,228 patients diagnosed with Hepatitis C (American Society of Clinical Oncology, 2017). According to the Centers for Disease Control and Prevention (CDC), from 2013-2018, the District had the highest incidence and mortality rates of liver cancer in the US (DC Cancer Registry, 2021).

<div align="center">

Objectives   **Measures**

</div>

		Baseline (Year)	Target (2026)
5.1	Increase percentage of adults born between 1945 and 1965 who have been screened for hepatitis C. *(Developmental)*	N/A	Developmental

STRATEGIES

- Educate health care providers on hepatitis screening guidelines for adults born between 1945 and 1965 and for high-risk populations (IV drug users and ethnic Asians, Pacific Islanders and the Afro-diaspora). (S)
- Promote community-clinical linkages to identify those at increased risk and facilitate screening. (PSE)
- Increase the awareness of Hepatitis C risk for people who inject drugs (PWID) through syringe services programs.
- Implement disease surveillance and investigation processes for the identification and follow-up of individuals that have been diagnosed with viral hepatitis but have failed to receive appropriate treatment and/or achieve sustained virologic response;
- Develop a Peer Health Team to serve as patient navigators for people living with HCV and/or HBV.

EARLY DETECTION
Detect cancer at its earliest stages

Early detection of cancer—finding and diagnosing disease before symptoms start—can increase the chance of successful treatment/survivorship for patients by finding cancers at their earliest stages. The objectives, measurements and strategies in this plan are based on screening recommendations by the United States Preventive Services Task Force (USPSTF).
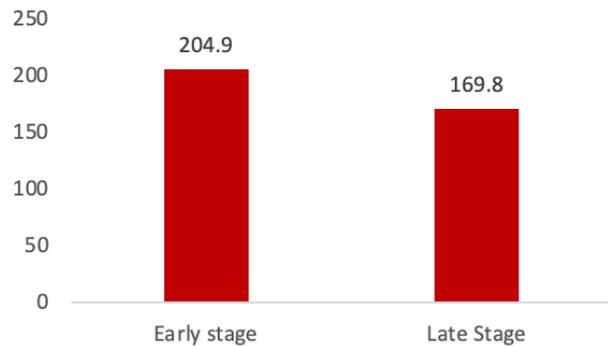
Figure 10: Cancer Stage Diagnosis per 100,000 (DCCR, 2018)

Cancer Type	Age				
	21 - 29	30 - 39	40 - 49	50 - 65	66+
Breast	N/A	N/A	N/A	Mammography Screening every 2 years (ages 50-74)	
Cervical	Pap Test every 3 years	**Ages 30-65 (one of the following)** Pap Test every 3 years High-risk HPV testing alone every 5 years High-risk HPV testing in combination with Pap every 5 years (co-testing)			N/A
Colorectal	N/A	N/A	**Ages 45-75 (one of the following)** High-sensitivity gFOBT or FIT every year sDNA-FIT every 1 to 3 years CT colonography every 5 years Flexible sigmoidoscopy every 5 years Flexible sigmoidoscopy every 10 years + FIT every year Colonoscopy screening every 10 years		
Lung	N/A	N/A	N/A	**Ages 50-80** Annual screening for lung cancer in adults aged 50 to 80 years who have a 20 pack-year smoking history and currently smoke or have quit within the past 15 years.	
Prostate				**Men aged 55 to 69 years** should make an individual decision about whether to be screened after a conversation with their clinician about the potential benefits and harms	**For men 70 years and older,** the potential benefits do not outweigh the expected harms, and these men should not be routinely screened for prostate cancer.

Figure 11: Cancer Screening Guides

*Based on recommendations from US Preventative Services Task Force

Cancer staging is the process of determining where and how much cancer is in the body. For the purposes of this plan, the American Joint Committee on Cancer (AJCC) staging is used where Stage I indicates a small tumor that has not spread to surrounding tissues. Stages II and III indicate the tumor is large and possibly spread into surrounding tissues. Stage IV cancer has spread to other parts of the body.

Most cancers in the District are diagnosed at an early stage (Figure 10), but there are significant disparities across wards. In DC for all cancers combined, the highest late-stage incident rate was observed in Ward 8 (215.5 cases per 100,000 persons) while the lowest was observed in Ward 3 (142.5 cases per 100,000 persons) (DC Vital Records, 2022). These disparities correlate to higher rates of late-stage diagnosis among Black/AA residents (220.57) than among White residents (149.34) (DC Vital Records, 2022). This disparity in detecting cancer at its earliest stages is likely a key contributor to the disproportionate burden of cancer deaths in the District. The goals, objectives, and strategies outlined in this plan aim to address these disparities.

GOAL 6. Reduce Late-Stage Diagnosis of Cancer for Which Screening is Available

6A. BREAST CANCER SCREENING
Breast cancer is the most common cancer and the second leading cause of cancer death among women in the District (CDC, 2018). Finding and diagnosing breast cancer in its more advanced stages decreases the chances of successful treatment. In DC, the highest incidence of late-stage breast cancer was observed in Ward 4 (53.8 per 100,000), followed by Ward 7(52.9 per 100,000) and Ward 8 (52.1 per 100,000). The lowest incidence of late-stage breast cancer diagnosis however was observed in Ward 3 (46.5 per 100,000) (DC Vital Records, 2022). It's important to note that African Americans make up 66% of the population in Wards 5, 7, and 8 but only 2% of the population in Ward 3 (Decenial Census, 2020).

Routine screening increases the likelihood that breast cancer can be found early and when it is most treatable. The District's breast cancer screening rate remains high at 79.9%, higher than the national rate (78.3%) (CDC BRFSS, 2018). Despite this, African American women have a disproportionately higher mortality rate (36.2 per 100,000) in DC compared to their White counterparts (15.1 per 100,000). However, incidence rates for African American women were lower (131.3 cases per 100,000) than for whites (149.3 cases per 100,000). Women at the highest risk for breast cancer mortality in DC are African American, over 50 years old, diagnosed at late stages, and residents of Wards 5, 7 and 8 (DC Vital Records, 2022).

All women are at risk for breast cancer, some women are at increased risk based on a variety of factors including family history or a close relative with a known gene mutation. Research indicates that 5% to 10% of breast cancer cases occur in women with inherited mutations in highly penetrant breast cancer susceptibility genes. More specifically, the BRCA1 and BRCA2 germline mutations account for 80% to 90% of families containing multiple cases of breast and ovarian cancer (Daly & Olopade, 2015). A woman's health care provider can perform a breast cancer risk assessment that considers family history; age at menses, at childbearing, and at menopause; alcohol use; exercise; diet; and weight. Those at high risk should consider being screened more frequently and at an earlier age.

	Objectives	Baseline (Year)	Target (2026)
		Baseline (Year)	**Target (2026)**
6.1	Increase the percentage of women aged 50-74 who have had a mammogram within the past two years. (Data Source: BRFSS)	79.7% (2018)	84.8%
6.2	Decrease the rate per 100,000 of breast cancer cases diagnosed later than Stage 2 among African American women. (Data Source: DC Cancer Registry)	45.1 (2018)	40.2

STRATEGIES

- Implement evidence-based strategies – patient navigation, patient and provider reminders, removal of structural barriers, education, and provider assessment and feedback – in the clinical setting to increase screening uptake. (PS)
- Implement evidence-based strategies – community health workers, motivational interviewing, and targeted outreach – in the community setting to increase screening uptake, specifically targeting populations experiencing disparate health outcomes. (PS)
- Increase capacity of federally qualified health centers, health clinics, primary care practices, and hospitals to implement cancer navigation strategies, focusing on women with known risk factors. (PS)
- Educate health care providers on impacts of implicit bias on patient experience, engagement and health behaviors. (S)
- Educate health care providers about risk factors for breast cancer and risk assessments for women and propose tying quality and financial metrics to appropriate risk factor assessment and screening. (PS)
- Educate the public about risk factors for breast cancer and risk assessments for women.
- Encourage informed decision-making for screening in women aged 40-49. (PS)
- Educate providers and community-based organizations about low- and no-cost cancer screening and diagnostic resources, such as Project WISH. (S)
- Educate the public about low- and no-cost cancer screening and diagnostic resources, such as Project WISH. (S)

6B. CERVICAL CANCER

Cervical cancer screening not only detects cancer early, it can also identify the presence of precancerous cells that can be removed to prevent cancer. In 2018, the age-adjusted prevalence of women aged 21-65 years who reported having had a Pap smear within the last three years was 82.2% (CDC BRFSS, 2018).

> *The USPSTF recommends screening for cervical cancer in women age 21 to 65 years with cytology (Pap smear) every 3 years or, for women age 30 to 65 years who want to lengthen the screening interval, screening with a combination of cytology and human papillomavirus (HPV) testing every 5 years.*

Objectives   Measures

		Baseline (Year)	Target (2026)
6.3	Increase the percentage of women aged 21-65 who meet recommended screening guidelines for cervical screening (Pap test, HPV test, or a combination). (Data Source: BRFSS)	82.2% (2018)	82.9%
6.4	Decrease the proportion of women diagnosed with cervical cancer later than Stage 2. (Data Source: DC Cancer Registry)	3.9 (2014-2018)	3.2

6C. COLORECTAL CANCER

Colorectal cancer is the 5th leading cause of cancer death in the District. Black/African American residents have nearly 2 and 4 times higher incidence and mortality rates than White residents in DC, respectively (DC Vital Records, 2022). Non-Hispanic White (78.2%) residents in DC are more likely to have age-appropriate screenings than non-Hispanic Blacks (72.7%) and Hispanics (65.7%) (CDC BRFSS, 2018). Several tests can be used to screen for colorectal cancer including stool tests, flexible sigmoidoscopy, colonoscopy, and CT colonoscopy.

| Objectives | | Measures | |

		Baseline (Year)	Target (2026)
6.5	Increase percentage of adults aged 50-75 who have met the USPSTF recommendation for colorectal cancer (CRC)screening. (Data Source: BRFSS)	82.2% (2018)	82.9%
6.6	Decrease rate per 100,000 of colorectal cancer cases diagnosed later than Stage 2. (Data Source: DC Cancer Registry)	3.9 (2014-2018)	3.2

STRATEGIES
- Implement evidence-based strategies – patient and provider reminders, screening navigation, removal of structural barriers, and provider assessment and feedback – to increase screening. (PS)
- Promote community-clinical linkages to increase demand for screening. (SE)
- Educate providers on the importance of offering all recommended colorectal cancer screening modalities to average risk patients and offering screening tests to patients that they are most likely to complete. (PS)
- Leverage HRSA-required clinical quality measures for colorectal cancer screening among FQHCs to increase screening rates among disproportionately affected populations. (PS)
- Consider the patient risk profile in determining recommendations for CRC screening. (PS)
- Identify high risk patients who might benefit from screening earlier than age 50. (PS)

6D. LUNG CANCER

Lung cancer is the 3rd most commonly diagnosed cancer in DC but is the leading cause of cancer deaths. Screening is recommended for individuals with a 30-pack year history and currently smoke, or who have quit within the past 15 years. USPSTF recommendations for lung cancer screening were updated in 2013, baseline measures and targets for lung cancer screening objectives are developmental.

| Objectives | | Measures | |

		Baseline (Year)	Target (2026)
6.7	Increase percentage of adults age 50-80 who meet the eligibility requirements for screening and have been screened. (Data Source: BRFSS)	Developmental	Developmental
6.8	Decrease the rate per 100,000 of lung cancer cases diagnosed later than Stage 2. (Data Source: DC Cancer Registry)	25.8 (2018)	23.2

STRATEGIES
- Implement evidence-based strategies – patient and provider reminders, screening navigation, removal of structural barriers, and provider assessment and feedback – in the clinical setting to increase screening. (PSE)
- Promote USPSTF lung cancer screening guidelines to providers and to the public. (PS)

6E. PROSTATE CANCER

The use of prostate screening examinations for the early detection of prostate cancer has been widely debated due to variations in benefits for men who are considered high risk versus those who are not. Despite this, **all men** should make an informed decision on whether to be screened by discussing the risks and benefits of the exam with their provider. Factors that increase the risk of developing prostate cancer include age (more than 60% of prostate cancers are diagnosed in men 65 and older), race and ethnicity (Black men have higher than average risk while Hispanic men have lower than average risk); family history of prostate cancer; and a family history of certain genetic mutations (American Cancer Society, 2017).

Objectives   Measures

		Baseline (Year)	Target (2026)
6.9	Decrease the rate per 100,000 of prostate cancer cases (Data Source: DC Cancer Registry)	133 (2018)	125.4

STRATEGIES

- Promote nationally recognized prostate cancer screening guidelines to health care providers and to the public. (PS)
- Promote the use of evidence-based tools – such as those developed by American College of Preventive Medicine and American Cancer Society – designed to support informed decision-making. (PS)
- Continue to monitor medical science and prostate cancer screening recommendations. (PS)
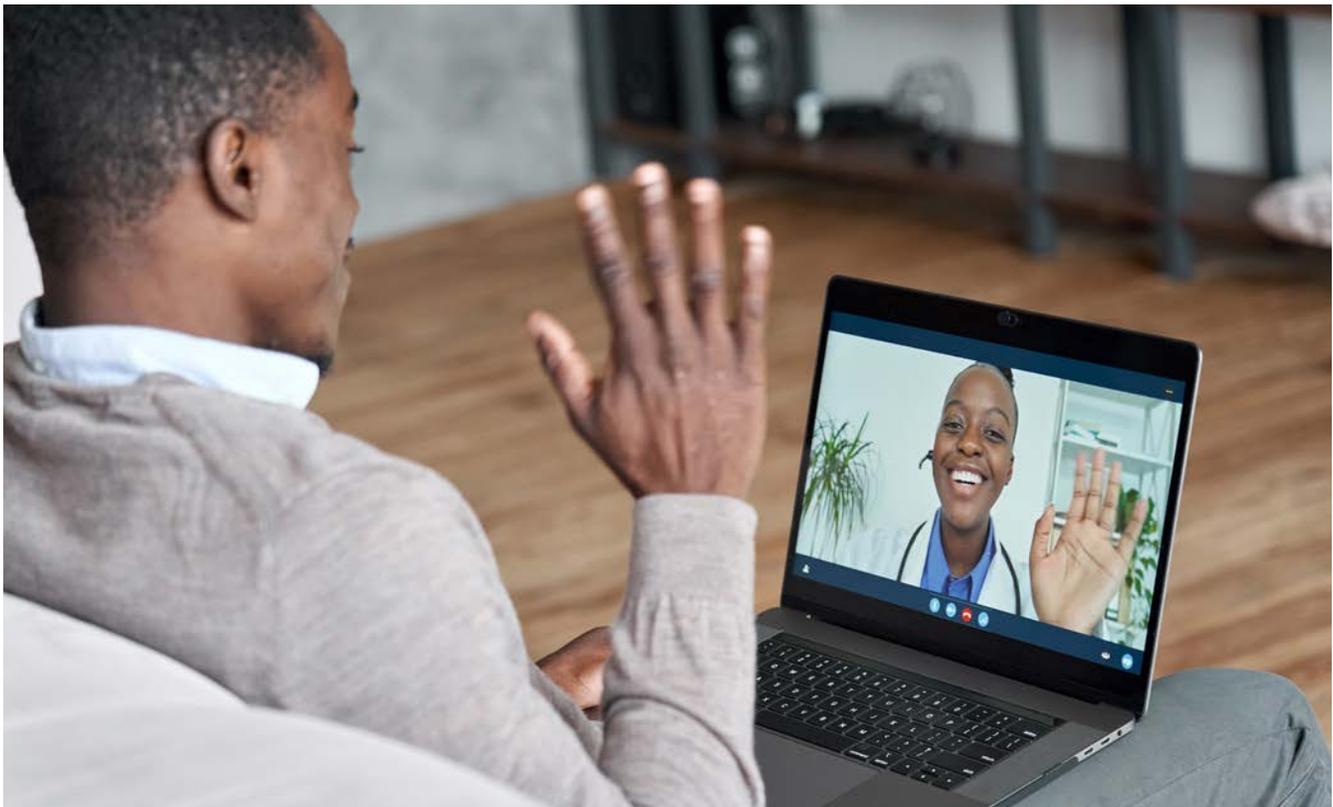
DIAGNOSIS & TREATMENT
Diagnose and treat cancer with appropriate, timely, culturally competent and quality care

Underuse of adjuvant therapies, such as chemotherapy or radiation, among minorities may underly observed differences in cancer survival in Blacks/African Americans with non-metastatic breast cancer, non-small cell lung cancer, and colorectal cancer. For these cancers, Blacks are also less likely, compared to Whites, to undergo surgical procedures that offer the best outcomes (Esnaola, MD, MPH, MBA & Ford, PhD, 2012). Data from the DC Cancer Registry show that African Americans with breast, colorectal and lung cancer, experience longer length of time (days) between diagnosis and the initiation of treatment than Whites (Figure 11).

	White	AA	All
Female breast cancer	34 (21-50)	47 (27-69)	39 (23-62)
Lung and bronchus	26 (3-48)	37 (15-66)	36 (10-62)
Colon and rectum	11 (0-25)	19(0-48)	15(0-37)

Table 1: Median (Interquartile Ranges) time from diagnosis to initiating a cancer treatment (days), by race (DCCR 2018)
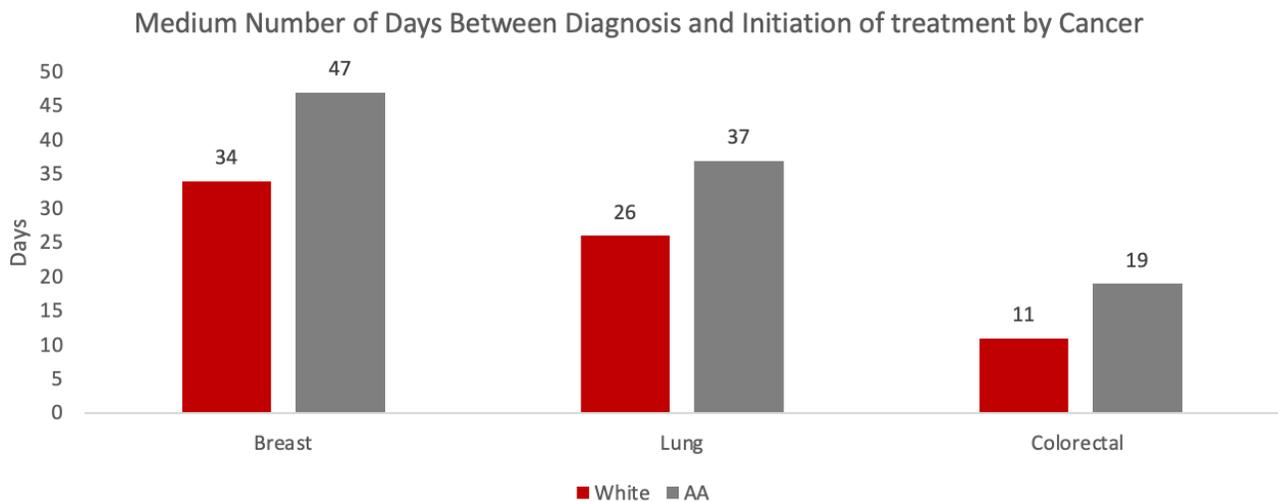
Figure 11: Median number of days between diagnosis and initiation of treatment by Race (DCCR, 2018)

Optimal health outcomes depend, in part, upon timely diagnosis of cancer and completion of recommended treatment and adjuvant therapies. Delays in diagnosis after screening, delays initiating treatment after diagnosis, insufficient recommendations to optimal treatment protocols, and physician referral barriers are contributing factors to documented disparities in cancer outcomes in the District.

GOAL 7. Decrease cancer mortality rates for all DC residents

7A. PATIENT NAVIGATION

Patient navigation is the process by which a person is guided through the often-complex health care systems to facilitate screening, timely diagnosis, and treatment adherence. Comprehensive navigation goes beyond appointment scheduling and patient reminders by identifying and seeking resolution to barriers such as transportation, language, health literacy, and financial challenges. Navigators represent a variety of backgrounds ranging from clinical (nurse) to lay staff. DC Health collaborates with community and clinical partners to implement patient navigation activities in clinics serving residents in high need, and high cancer mortality Wards. These partners include Howard University Cancer Center, Howard University Hospital, Medstar Washington Hospital Center, Breast Care for Washington, Capital Breast Care Center, Unity Health Care and Family Medical Counseling Services. The navigators provide a range of services to DC residents including language translation, insurance counseling, and referrals to social/community services. Other cancer centers providing comprehensive patient navigation services to DC residents include the GW Cancer Center and the Georgetown Lombardi Comprehensive Cancer Center.

<table>
<tr><td colspan="2" align="center">**Objectives**</td><td colspan="2" align="center">**Measures**</td></tr>
<tr><td colspan="2"></td><td align="center">**Baseline (2018)**</td><td align="center">**Target (2026)**</td></tr>
<tr><td>7.1</td><td>Decrease time (# of days) from diagnosis to treatment for cancers with recommended screenings. Ensure that time from diagnosis to treatment does not exceed 50 days. *(Data Source: DC Cancer Registry)*</td><td>**Breast Cancer: 42 Colorectal Cancer: 17 Lung: 36**</td><td>**Breast Cancer: 35.1 Colorectal Cancer: 13.5 Lung: 32.4**</td></tr>
<tr><td>7.2</td><td>Decrease the disparity (difference in time/# of days) from diagnosis to treatment between Blacks/African Americans and Whites. *(Data Source: DC Cancer Registry)*</td><td>**Breast Cancer: 13 Colorectal Cancer: 8 Lung: 11**</td><td>**Breast Cancer: 11.7 Colorectal Cancer: 7.2 Lung: 9.9**</td></tr>
<tr><td>7.3</td><td>Create a profile of patients at high risk of delaying resolution and treatment after diagnosis who could benefit from patient navigation services *(Data Source: DC Cancer Registry & PW EHR)*.</td><td align="center">0</td><td align="center">1</td></tr>
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STRATEGIES

- Utilizing a staged approach;
  - Assess existing patient navigation systems for gaps in services. (PS)
  - Promote existing standards and core competencies for patient navigators. (PS)
  - Establish data tracking and monitoring standards for patient navigation activities. (PS)
  - Promote awareness of local patient navigation resources and networks, especially among minority populations. (PSE)
  - Utilize trained community health workers to enhance patient navigation efforts and promote community-clinical linkages. (PSE)
  - Educate health care providers on cultural competency, implicit bias and systemic racism that can influence recommendations for completion of treatment and adjuvant therapies. (PS)

7B. CLINICAL TRIALS

The National Institutes of Health defines clinical trials as research studies that evaluate the effects of an intervention on health-related biomedical or behavioral outcomes. Clinical trials can determine if a treatment – a drug, procedure or device – is safe and effective and whether or not it is more effective than other treatments. Only 2-3% of all patients in the US with cancer ever enroll in a clinical trial, estimates of the number of trials failing to meet scientific objectives is between 22-55% (CDC BRFSS, 2018). This lack of participation hinders the development of new therapies.

Minority participation in trials can aid in the identification of therapies that provide the best outcomes in those populations, but both racial and ethnic minorities are underrepresented. African Americans represent 12% of the total US population, yet only about 5% of participants in clinical trials (Esnaola, MD, MPH, MBA & Ford, PhD, 2012). Amongst Latinos, cancer is the second leading cause of death, but they represent only 2-3% of participants in cancer clinical trials (Hamel, et al., 2016). Adults 65 and older, adolescents, and young adults are also underrepresented in clinical trials.

Objectives   Measures

		Baseline (Year)	Target (2026)
7.4	Increase cancer clinical trial participation among DC residents diagnosed with cancer. (Data Source: BRFSS 2019 Cancer Survivor Module)	8.9% (2019)	9.9
7.5	Increase the number of minority cancer patients participating in clinical trials. (Data Source: BRFSS 2019 Cancer Survivor Module)	14.8% (2019)	16.5

STRATEGIES
- Educate cancer patients on clinical trials and the importance of minority participation. (PS)
- Educate health care providers, patient navigators, and case managers on culturally appropriate communication strategies to promote clinical trials enrollment to patients. (PS)
- Promote clinical trial matching services. (PS)
- Advocate for policies to remove structural barriers to clinical trials (i.e., no out-of-pocket expenses for ancillary treatment). (PS)
- Promote the use of initiatives and resources that enhance minority participation in clinical trials such as NIH's EMPACT Website (NIH).
- Use new emerging platforms of interactions such as social media for connecting with underserved groups and tackle historical barriers in recruiting minorities in clinical trials (NCI).

GENETICS
Increase appropriate use of genetic testing, counseling, and education

Known genetic mutations have been found to increase a person's risk of developing some types of cancers. Inherited genetic mutations are associated with as many as 5% to 10% of all cancers. Hereditary cancer syndromes, such as hereditary breast and ovarian cancer syndrome (HBOC) and Lynch syndrome (LS), increase cancer risk.

According to 2018 data from the District of Columbia Cancer Registry, 73% of breast and 42% of CRC cancer patients indicated a family history of any cancer (one should interpret findings carefully due to approximately 50% of AA and 30% White had missing information on a family history of cancer). In many cases, a cancer diagnosis at a younger age typically indicates genetic underpinnings. The Oncotype DX® test is a gene expression test used to learn more about the chances of cancer returning. The percentage of breast cancer patients with oncotype diagnosis risk level was 64%.

Microsatellite Instability (MSI) is a molecular change that can occur with colorectal cancer (CRC). The CRC screening for MSI was 42%. Thus, the percentage of patients who receive any type of genetic testing is less than optimal.

Screening for the likelihood of cancer development using family history may help identify individuals at higher risk for several cancer types. As we learn more about genetics and the relationship to cancer, more inherited genetic mutations as a cancer risk factor might be identified.

GOAL 8: Increase appropriate use of genetic testing

8A. HEREDITARY GENE MUTATIONS.
When a person is diagnosed with cancer, genetic testing might be considered to determine targeted therapies and follow-up care and screening. This information can also be helpful for family members in documenting their family health history. A provider may recommend genetic testing for cancer patients if the patient's health history includes:

- A strong personal or family indication of a possible genetic mutation;
- A personal diagnosis of cancer at a younger age than normal;
- Many relatives diagnosed with the same type of cancer or diagnosed at a younger age than expected;
- Family members with rare cancers (such as male breast cancer);
- Ethnicity (such as Ashkenazi Jews who have an increased risk of breast and ovarian cancer);
- A known gene mutation in a family member:
- A medical condition that indicates a link to an inherited cancer (such as certain types of colon polyps).

Objectives		Measures	
		Baseline (Year)	**Target (2026)**
8.1	Increase the percentage of genetic counseling and testing opportunities for cancer patients (when an assessment of factors indicates a possible hereditary cancer syndrome).	Developmental	Developmental
8.2	Increase the percentage of people who report discussing family medical history with their physician.	Developmental	Developmental

STRATEGIES

- Educate providers, navigators, and cancer patients about the benefits and risks of genetic testing. (PS)
- Promote guidelines/policies for referring patients to genetic counseling. (PS)
- Promote family medical history collection tools for individuals to better understand their risk. (PS)
- Advocate for required reporting of genetic testing to the cancer registry when cancer has been diagnosed and counseling/testing recommended. (PS)

8B. GENETIC TESTING FOR TREATMENT

Each individual's cancer, like fingerprints, is unique in its genetic changes. DNA sequencing of the tumor can identify these changes and indicate where targeted therapies could be effective. This personalized or "precision" medicine can only be used in those cases where tumors have been tested and have revealed specific genetic mutations (National Cancer Institute, 2019).

Objectives   Measures

		Baseline (Year)	Target (2026)
8.3	Increase percentage of appropriate cancers undergoing DNA sequencing to inform treatment protocols. (Data Source: DC Cancer Registry) **Breast Cancer-BrCA** **Colorectal Cancer-KRAS** **MSI-Lynch Syndrome/Colorectal Cancer**	BrCa: 64% KRAS: 11% MSI: 42% (2018)	BrCa: 68.7% KRAS: 14.3% MSI: 47%

STRATEGIES

- Promote guidelines for testing/DNA sequencing of specific cancers to enhance treatment protocols. (PS)
- Advocate for required reporting of genetic testing of tumors to the DC Cancer Registry. (PS)
- Disseminate information on advancements in genetic research and recommended tests to determine treatment protocols. (PS)

The National Human Genome Research Institute offers online tools and resources to track family health history and assess cancer risk.

SURVIVORSHIP & PALLIATIVE CARE
Improve the quality of life from diagnosis through the balance of life

Cancer survivorship begins at diagnosis and continues through the balance of life. Currently there are an estimated 18,750 cancer survivors living in the District of Columbia (DC Cancer Registry, 2019).

The survivor journey presents challenges not only during active treatment but also in follow-up care and surveillance. Understanding long term side effects, drug interactions, follow-up protocols, and the importance of healthy behaviors (exercising, eating a healthy diet, stopping smoking, and minimizing UV radiation exposure) can improve survival rates.

GOAL 9: Improve the quality of life from diagnosis through the balance of life

9A. SURVIVORSHIP CARE PLANS
Survivorship care plans provide patients with a personalized record of treatment as well as a plan for follow-up, future screening recommendations, post-treatment side effects, and tips to reduce risk of recurrence and improve health overall. These plans can also guide the care a patient receives when returning to his or her primary care physician. Care plans can be a valuable tool as well for survivors managing co-morbidities such as hypertension, heart disease, and diabetes.

Objectives   Measures

		Baseline (Year)	Target (2026)
9.1	Increase the number of adults diagnosed with cancer who report they received a survivorship care plan that include/s a comprehensive care summary and follow-up plan. (Data Source: BRFSS Cancer Survivorship Module)	88% (2019)	91%

STRATEGIES
- Promote integration of comprehensive care into survivorship care plans including treatment and management of side effects from cancer-directed therapy in addition to age-appropriate, individualized preventive care. (PS)
- Assess the distribution and utilization of survivorship care plans by providers and patients (e.g., barriers, limitations, etc.)
- Educate specialists and primary care physicians on the importance and use of care plans to address the ongoing unique needs of cancer patients. (PS)
- Educate cancer survivors about how to use their survivorship care plans. (PS)
- Promote the development, standardization and use of care plans and care plan platforms that demonstrate meaningful use of EHR, can be updated as needed, and integrate improved access to care technology (such as telemedicine). (PS)
- Promote policies that support reimbursement for development and delivery of survivorship care plans.

9B. SURVIVORSHIP CARE PLANS

Improvement in screening, diagnosis and treatment have resulted in improved cancer survival rates. Survivors have unique needs to maintain their health status/quality of life. Cancer survivors in general have poorer health outcomes, though, than similar individuals who have not had cancer (The Advisory Board Company, 2014).

As cancer becomes a more chronic condition due to improvements in treatment and early detection, the aging population of cancer survivors increases the likelihood of co-morbidities. Over 60% of cancer patients are diagnosed at the age of 65 years or older and many suffer from existing chronic conditions that can possibly double or triple their probability of death. Comorbidities impact the choice of treatment, including surgery and adjuvant chemotherapy, and patients with comorbidities are less likely to participate in clinical trials (Sogard, Thomsen, Bossen, Sorensen, & Norgaard, 2013). The top four most common cancers in the US – lung, colorectal, breast, and prostate – show co-morbidity rates of 52.9%, 40.7%, 32.3%, and 30.5%, respectively (Roy, Vallepu, Barrios, & Hunter, 2018).

Objectives   Measures

		Baseline (Year)	Target (2026)
9.2	Increase the percentage of adult cancer survivors who report that their general health is good to excellent. (Data Source: BRFSS)	73% (2019)	80.1%
9.3	Decrease percentage of adult cancer survivors who smoke cigarettes. (Data Source: BRFSS)	10% (2019)	8.1%
9.4	Increase percentage of adult cancer survivors who report engaging in physical activity in the past 30 days. (Data Source: BRFSS)	73% (2019)	82%
9.5	Increase percentage of adult cancer survivors who report consuming at least one serving of fruits and one serving of vegetables each day. (Data Source: BRFSS)	Fruit: 83% Veg: 66% (2019)	Fruit: 86.6% Veg: 70.6%
9.6	Reduce percentage of adult cancer survivors who are obese according to BMI.	30% (2019)	16.2%

STRATEGIES
- Promote utilization of survivorship care plans to support and monitor survivor health behaviors among both providers and patients. (PS)
- Educate oncology and other health care providers on the importance of and strategies for improving lifestyle behaviors among cancer patients and survivors. (PSE)
- Encourage enrollment, participation, and continued engagement in evidence-based nutrition education and physical activity programs such as SNAP-Ed, Weight Watchers, YMCA's Blood Pressure Self-Monitoring Program, the National Diabetes Prevention Program, Walk with Ease, Active Living Everyday, and Fit Strong at the start of treatment and throughout the balance of life. (PSE)
- Promote evidence-based self-management programs such as Cancer: Thriving and Surviving. (PS)
- Encourage and support survivor tobacco cessation by referring survivors to community-based programs, such as the DC Quitline. (PS).
- Monitor Quitline calls from cancer survivors.

9C. PALLIATIVE CARE

Palliative care during and after active treatment improves quality of life both for cancer patients and their families. Often confused with end-of-life care, it can be given along with curative treatments to patients of any age, type of cancer or stage of disease. Pain control, symptom management, and psychological and spiritual support for patients and their families are all part of palliative care (National Consensus Project for Quality Palliative Care, 2018).

Objectives   Measures

		Baseline (Year)	Target (2026)
9.7	Maintain the District's grade on the Palliative Care State-by-State Report Card at an A. (Data Source: Center to Advance Palliative Care)	A (2019)	A
9.8	Decrease percentage of survivors who report their mental health was not good for one or more days during the past 30 days (Data Source: BRFSS).	38% (2019)	37.1%
9.9	Decrease the average number of days survivors report that poor physical or mental health kept them from doing usual activities such as self-care, work, or recreation at least one or more days during the last 30 days (Data Source: BRFSS).	38% (2019)	42.0%

STRATEGIES

- Assess palliative care needs of survivors, current resources, and gaps in care. (PS)
- Promote systems change to integrate palliative care practice guidelines into routine cancer care. (PSE)
- Educate providers (physicians, oncologists, and other medical professionals) about the benefits and availability of palliative care services for symptom management, locations of services, and reimbursement. (PS)
- Promote the availability of palliative care services and educate cancer survivors, caregivers, and families in inpatient and outpatients cancer centers. (PS)
- Integrate palliative care services into patient-centered medical homes. (PSE)

EVALUATION OF THE PLAN

Monitoring and evaluation is an integral part of the cancer plan: assessing progress; determining successes and lessons learned; identifying programs that are achieving cancer plan goals and objectives; and informing planning and implementation of future cancer control and prevention efforts.

The evaluation will assess three areas:
1. Partnerships: quality, collaboration, and impact of the District cancer coalition;
2. Plan: the achievement of the DC Cancer Control Plan 2022-2026 goals and objectives; and
3. Program: the extent to which interventions outlined in the Cancer Control Program are executed and yield intended results.

Surveillance and population data are used to determine baselines, targets, and identify/ describe priority populations. Data sources include DCCR, BRFSS, American Community Survey, HRSA Health System Program Data, Youth Tobacco Survey and National Immunization Survey. BRFSS data, for example, is used to describe demographics, socioeconomics, health seeking behaviors, risk factors, and comorbidities of populations less likely to receive cancer screening. Annual age-adjusted cancer incidence and mortality rates from the DCCR are stratified by demographics and geographic area (Wards, Census Tracts) to identify communities and sub-populations at higher risk. The American Community Survey characterizes residents living within high-risk communities (demographics, insurance status, employment rate, household income).

Evaluation efforts employ routine and systematic tracking and monitoring of Cancer Control Program interventions. Evaluation questions, based on program priorities, feasibility, and availability of data, will guide evaluation planning and implementation to inform how evaluation results can be used to improve program processes or approaches. Evaluation findings will demonstrate achievement of intended outcomes and contributions of the cancer coalition and program partners to overall goals.

2013-2018 DC CANCER CONTROL PLAN REPORT CARD

The previous District of Columbia Cancer Plan covered the period between 2013-2018. This report card provides data to show what progress has been made and where additional work is still needed to reduce the burden of cancer. Partners are encouraged to use this report card to inform their own program strategies and the areas where effort is still needed to meet goals.

*Please note, only measurable objectives with identified data sources are included.

The 2013-2018 DC Cancer Plan's baseline and targets were developed using the 2010 Behavioral Risk Factor Surveillance System (BRFSS) data (the most recent data available at the time). Due to changes in the methodology of implementing the survey, current data cannot be compared to data from years prior to 2012. For the purpose of this Cancer Plan Report Card, we have adjusted the baseline to 2012 where BRFSS is the data source. Those objectives with adjusted baselines are noted with an asterisk (*).

Also, the calculation for colorectal cancer screening for average risk adults 50 and older was incorrect. The baseline measurement has been corrected for this report card. The goal was adapted to match the National Colorectal Cancer Round Table's goal of achieving 80% CRC screening by 2018.

CANCER PLAN REPORT CARD 2013-2018

Prevention/Risk Reduction Goals	BASELINE	TARGET	CURRENT
Reduce the proportion of African American and Hispanic residents who are either adult smokers or middle and high school youth lifetime users by 10% of 2010 BRFSS and Youth Risk Behavior Survey (YRBS) baselines.*	AA: 28.4% Hispanic: 14.2% (2013)	AA: 26% Hispanic: 13%	AA: 21.4% Hispanic: 9% (2017)

Screening Goals	BASELINE	TARGET	CURRENT
Increase the number of women aged 40 years and older who have received a mammogram within the past two years.*	79.1% (2012)	90%	72.5% (2018)
Increase cervical cancer screening rates for African American, Hispanic/Latina, and Asian women aged 21 to 65 years 10% above 2010 BRFSS baseline.*	81% (2012) *18+ years*	89%	78.0% (2018) *18+ years*
Increase by 20% colorectal cancer screening activity for average-risk residents 50 years and older. (The baseline was calculated incorrectly for the 2013-2018 plan.)*	N/A	N/A	73.8% (2018)

The DC Cancer Plan 2013-2018 set 2010 Behavioral Risk Factor Surveillance System (BRFSS) data as the baseline for many objective targets. Due to changes in the methodology of implementing the survey, current data cannot be compared to data from years prior to 2012. For the purpose of this Cancer Plan Report Card, we have adjusted the baseline to 2012 where BRFSS is the data source.

Cancer Incidence in DC**	BASELINE	TARGET	CURRENT
Reduce overall cancer incidence in DC.	480.6 (2008)	Not defined	417.7 (2018)
Reduce the incidence of colorectal cancer in the District.	42.8 (2008)	Not defined	38.3 (2018)
Reduce by 50% the gap in the 2008 colorectal cancer incidence rate between Black residents and White residents.	NHB 49.3 NHW 33.9		NHB 43.3 NHW 28.7 (2018)

Cancer Mortality in DC**	BASELINE	TARGET	CURRENT
Reduce overall cancer mortality in DC.	79.1% (2012)	Not defined	155.4 (2018)
Reduce breast cancer mortality.	28 (2008)	Not defined	36.3 (2018)
Reduce mortality due to colorectal cancer in the District.	18.2 (2008)	Not defined	17.9 (2018)
Reduce mortality due to prostate cancer in the District.	29 (2008)	Not defined	47.7 (2018)

Data & Surveillance**	BASELINE	TARGET	CURRENT
Reduce the proportion of un-staged prostate cancer cases for all races.	24.8 (2018)	19.8	16.3 (2016)

*Rates for both cancer incidence and mortality in DC are age-adjusted per 100,000. Data source: DC Cancer Registry.

HOW TO USE THE CANCER PLAN 2022-2026

	Health Care Providers	Health Plans	Businesses	Community Organizations	Academic Institutions & Researchers	Advocates, Survivors & Individuals	Elected Officials & Governmental Agencies
Actively participate in the DC Cancer Action Coalition	✔	✔	✔	✔	✔	✔	✔
Advocate for policies, programs, and funding that support cancer control	✔	✔	✔	✔	✔	✔	✔
Leverage resources in collaboration with other organizations to improve health outcomes	✔	✔	✔	✔	✔	✔	✔
Promote and implement community-wide and workplace policies and initiatives that support healthy behaviors	✔	✔	✔	✔	✔	✔	✔
Become a Gold Standard employer (www.cancergoldstand.org)	✔	✔	✔	✔	✔	✔	✔
Use the cancer plan as a guide when selecting and planning cancer control programs, outreach and research efforts	✔	✔	✔	✔	✔		✔
Ensure that traditionally underrepresented populations are included in research studies and clinical trials	✔	✔		✔	✔	✔	✔
Distribute research findings and program results widely to other cancer control stakeholders		✔	✔	✔	✔		✔

	Health Care Providers	Health Plans	Businesses	Community Organiza-tions	Academic Institutions & Research-ers	Advocates, Survivors & Individ-uals	Elected Officials & Govern-mental Agencies
Study of DC-specific issues around health outcomes and mortality disparities and publish results (PS)	✔	✔		✔	✔		✔
Promote rigorous evaluation of community-based programs to assess their effectiveness.	✔	✔		✔	✔		✔
Work closely with benefits administrator to ensure health plans provide appropriate coverage along the cancer continuum	✔	✔	✔	✔			✔
Educate patients, beneficiaries and members about and support their pursuit of health behaviors, cancer screenings, clinical trials and survivorship resources	✔	✔		✔			✔
Educate patients, beneficiaries and members about and support their pursuit of health behaviors, cancer screenings, clinical trials and survivorship resources	✔	✔		✔			✔
Implement evidence-based quality improvement interventions to increase screening rates and treatment completion and promote healthy behaviors	✔	✔	✔				✔

Figure 12: HOW TO USE THE 2022-2026 CANCER PLAN

APPENDIX 1 – GLOSSARY

Adjuvant therapy: Additional cancer treatment given after the primary treatment to lower the risk that the cancer will come back. Adjuvant therapy may include chemotherapy, radiation therapy, hormone therapy, targeted therapy, or biological therapy. (National Cancer Institute, 2017).

Cisgender: Denoting a person whose gender identity corresponds with their birth sex.

Co-morbidity: When an individual has two or more illnesses or disorders occurring at the same time or after one another, which can worsen both conditions (National Institute on Drug Abuse, 2012).

Evidence-based intervention (EBI): A program, policy or initiative that has been shown to be effective to address an issue (such as barriers to care or access to healthy foods) through the evaluation of outcome measures. Food desert: Parts of the country that are lacking fresh fruit, vegetables, or other healthy food options. This is usually due to inadequate grocery stores, farmers' markets, or other health food providers (American Nutrition Association, 2011).

Hospice: A healthcare provider offering compassionate and quality care for individuals facing life-limiting injury or illness. The provided medical care focuses on pain management, comfort, and emotional and spiritual support for both the patient and their friends and family. The services may be offered in a hospice facility or hospital or at home. (National Hospice and Palliative Care Organization, 2017).

Informed consent: The right patients have to receive information and ask questions regarding recommended medications or treatments so that well-considered decisions about health care options may be made. Communication between the physician and patient is key to assure trust and support during the decision-making, authorization, and agreement process (American Medical Association, 2018).

Palliative care: Care that focuses on quality of life for patients with serious or life-threatening diseases, such as cancer. The goal of such care is to prevent or treat the symptoms and side effects of both the disease and its treatment, including social, psychological, and spiritual issues a patient may experience (National Cancer Institute, 2017).

Risk assessment: The qualitative or quantitative assessment of an individual's risk of carrying a specific gene mutation, developing a certain disorder, or having a child with a certain disorder. Personal health history, family medical history, and ethnic background all help to determine the risks associated with certain illnesses or diseases, such as cancer (National Cancer Institute, 2018).

Socioeconomic Status (SES): A composite measure of an individual's sociological and economic standing based on such factors as income, education, and occupation (National Cancer Institute, 2015).

Walkability: The overall support and availability for pedestrian travel in a given area, including quality of pedestrian facilities, roadway conditions, community support, security, and comfort for walking. Density and accessibility are also considered in regards to the distance between common or needed destinations, such as homes, schools, hospitals and health care facilities, parks, and shops (Victoria Transport Policy Institute, 2017).

APPENDIX 2 – RESOURCES

AccrualNetTM: An online resource developed by the National Cancer Institute to provide strategies, tools and resources to support participation in clinical trials. More info: https://accrualnet.cancer.gov

American College of Surgeons/Commission on Cancer (ACoS/CoC) accreditation: A multidisciplinary consortium of professional organizations focusing on the improvement of survival and quality of life for cancer patients. Their goal is reached through standard-setting, research, prevention, education, and monitoring of comprehensive quality care. More info: https://www.facs.org/quality-programs/cancer/coc (American College of Surgeons (ACoS), 2018)

Behavioral Risk Factor Surveillance System (BRFSS): The nation's system of health-related telephone surveys that collect data for all 50 states, the District of Columbia, and three U.S. territories, to monitor health-related risk behaviors, chronic health conditions, and use of preventative services. Questionnaires, methodology and some survey results are available online. More info: https://www.cdc.gov/brfss/index.html (CDC, 2018)

Cancer P.L.A.N.E.T.: Provides access to data and resources for planners, program staff, researchers, and governments to design, implement, and evaluate evidence-based cancer control programs. More info: https://cancercontrolplanet.cancer.gov/planet/ (Cancer Control P.L.A.N.E.T., 2018)

The Centers for Disease Control and Prevention (CDC): A U.S. national public health institute with the goal of protecting public health and safety. The federal agency works on the control and prevention of disease, injury, and disability both nationally and internationally. The CDC website provides general information, tools, resources and data for health providers, researchers and the general public. More info: https://www.cdc.gov/ (CDC, 2018b)

ClinicalTrials.gov: A database of privately and publicly funded clinical studies conducted around the world and hosted by Nation Institute of Health's U.S. National Library of Medicine. (NIH)

The Community Guide: A collection of evidence-based findings of the Community Preventive Services Task Force (CPSTF) guiding individuals in choosing evidence-based interventions to improve health and prevent disease in their community. The interventions aim to improve health directly and prevent or reduce risky behaviors, diseases, or detrimental environmental or social factors. More info: https://www.thecommunityguide.org/ (The Community Guide, 2018)

Dartmouth Atlas of Health Care 2014: Documentation, based on Medicare data, on the distribution and utilization of medical resources across the country. The project has contributed to the improvement of health and health systems in the nation. More info: http://www.dartmouthatlas.org/ (The Dartmouth Institute for Health Policy and Clinical Practice, 2014)

DC Healthy People 2020: A framework that sets goals, population-level health outcome objectives, and targets for the year 2020 for District of Columbia residents. This framework also provides recommendations on evidence-based strategies to improve such health outcomes. More info: https://dchealth.dc.gov/publication/dc-healthy-people-2020-framework (Government of the District of Columbia, Department of Health, 2016)

DC Cancer Registry: The Registry collects, maintains, and reports on all cancers diagnosed and/or treated in the District. The website hosts forms to request data and archives previous cancer burden reports. More info: https://dchealth.dc.gov/ (Government of the District of Columbia, Department of Health, 2018)

GW Cancer Center Action4PSEChange: An online platform to provide comprehensive cancer control professionals, coalitions, and communities with basic information on and resources for policy, systems, and environmental (PSE) change. More info: http://action4psechange.org/ (GW Cancer Center, 2017)

National Human Genome Research Institute, My Family Health Portrait: A web-based tool for individuals to create their own family health history, tracing illnesses and disorders within a family to help predict and take action to reduce risk for future illness. Provided by NHGRI and the U.S. Surgeon General's Family History Initiative, health information is entered to create a drawing of a family tree and a chart of family health history. This can be shared with family members and health care providers. More info: https://www.genome.gov/27527640/family-history-my-family-health-portrait/ (National Human Genome Research Institute, 2013)

National Immunization Surveys (NIS): A group of phone surveys monitoring vaccination coverage among children aged 19 to 35 months and teens aged 13 to 17 years, as well as flu vaccination for individuals aged 6 months to 17 years. The National Center for Immunization and Respiratory Diseases (NCIRD) of the CDC sponsor and conduct the surveys, which began in April 1994 in order to assess vaccination coverage after measles outbreaks in the 1990s. More info: https://www.cdc.gov/vaccines/imz-managers/nis/index.html (CDC, 2018c)

National Society of Genetic Counselors: In addition to providing resources for genetic counselors, the NSGC provides information for patients and a genetic counselor search tool. More info: https://www.nsgc.org/ (National Society of Genetic Counselors, 2018)

North American Association of Central Cancer Registries (NAACCR): Established in 1987, NAACCR, Inc. is a collaborative umbrella organization for cancer registries, governmental agencies, professional associations, and private groups in North America interested in enhancing the quality and use of cancer registry data. All central cancer registries in the United States and Canada are members. More info: https://www.naaccr.org/

Plan4Health: The key partnership between the American Planning Association and the American Public Health Association that leverages planners' roles as collaborators and conveners in improving health outcomes. Across the U.S., the project is launching and funding work at the intersection of planning and public health within neighborhoods, cities, and counties to improve health equity through nutrition and physical activity. The website provides resources to support innovative, sustainable work in local communities across the country. More info: http://plan4health.us/policy-systems-and-environmental-change-strategies/ (Plan4Health, 2018)

Policy, Systems and Environmental Change Resource Guide: Created through the collaboration between the Comprehensive Cancer Control National Partners and select CCC Program PSE demonstration projects. The guide provides models, resources, and tools to assist individuals with planning and implementing policy, systems and environmental agendas. More info: https://www.cccnationalpartners.org/new-resource-policy-systems-and-environmental-change-resource-guide (Comprehensive Cancer Control National Partners, 2016)

Profile of Active Hospice and Palliative Care Physicians, 2016: A report providing a summary of the hospice and palliative medicine (HPM) workforce in the U.S., including supply, demographics, general practice characteristics, educational background, and geographic distribution of physicians that are board-certified in or self-identified as practicing HPM. More info: http://aahpm.org/uploads/AAHPM17_WorkforceStudy_July_2017_Profile_Final.pdf (George Washington University Health Workforce Institute et al., 2017)

US Cancer Statistics Data Visualizations: The official government statistics on cancer, including cancer registry data from the CDC and the National Cancer Institute, as well as the CDC's National Center for Health Statistics mortality data. The visualizations show incidence data from 2014. More info: https://gis.cdc.gov/grasp/USCS/DataViz.html (CDC, 2014)

US Preventive Services Task Force (USPSTF): An independent, volunteer panel of national experts in prevention and evidence-based medicine. The USPSTF provides evidence-based recommendations for clinical preventive services based on a rigorous review of existing peer-reviewed evidence to help primary care clinicians and patients decide on preventive services together. More info: https://www.uspreventiveservicestaskforce.org/ (US Preventive Services Task Force, 2013)

Walkability Scores: Walkability is the measure of how accessible and friendly an area is for walking. A walkability score is used for individuals or researchers to better understand the links between the built environment and physical activity, obesity, and diabetes. Such scores can also highlight the influence of food deserts, park deserts, or public transit availability on public health. More info: https://www.walkscore.com/ (Walk Score, 2018)

Youth Risk Behavior Surveillance System (YRBSS): A survey to monitor health-risk behaviors that lead to death and disability among youth and adults. The six types of health-risk behaviors include: tobacco use, unhealthy diet, inadequate physical activity, alcohol or drug use, risky sexual behaviors (unintended pregnancy, STIs), and behaviors contribute to unintentional injuries and violence. More info: https://www.cdc.gov/healthyyouth/data/yrbs/index.htm (CDC, 2018d)

Youth Tobacco Survey: Data collection planned and implemented by individual State Departments of Health, from students in grades 6 through 12. The data intends to improve state agencies' and organizations' ability to design, implement, and evaluate tobacco prevention, control, and quitting programs. More info: https://www.cdc.gov/tobacco/data_statistics/surveys/yts/index.htm (CDC, 2011)
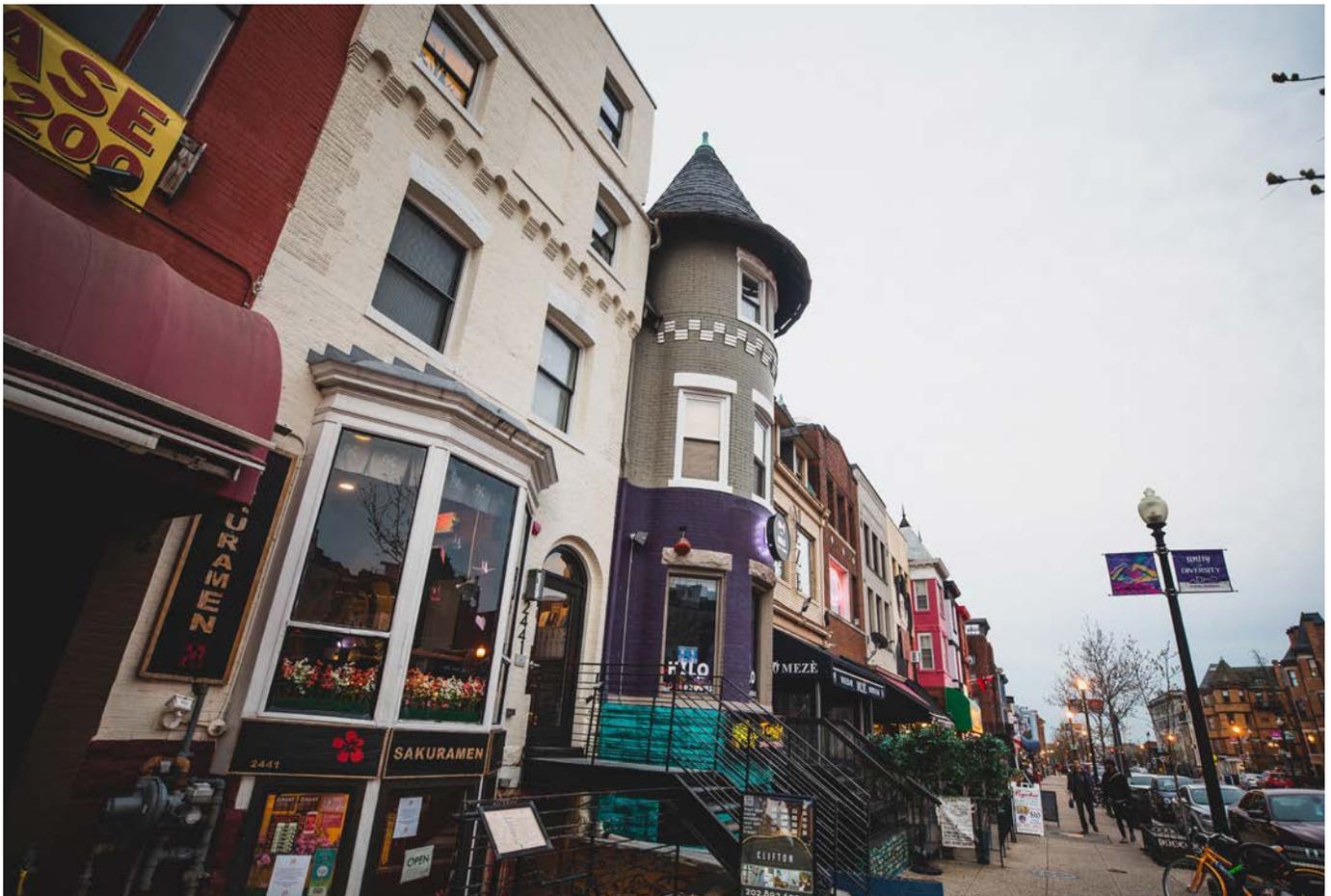
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