2021–2025
Utah Comprehensive Cancer Prevention and Control Plan

Prepared by the Utah Comprehensive Cancer Control Program

State of Utah

SPENCER J. COX
Governor

DEIDRE M. HENDERSON
Lieutenant Governor

Office of the Governor

Dec. 10, 2021

Dear Friends,

Cancer is the second leading cause of death in Utah. Many of us have people in our lives who have been affected by cancer.

Here in Utah, the fight against cancer is stronger than ever. We support opportunities to adopt healthy behaviors and work to detect cancers at their earliest stages. We protect ourselves and our children from harmful substances and we support medical research and provide state-of-the-art treatment. We provide cancer survivors and their loved ones with programs and services that address their physical, mental, and emotional needs, increasing their quality of life.

Utah has been in this fight for decades. The Utah Department of Health Comprehensive Cancer Control program works diligently to reduce the cancer burden in our state. The Utah Cancer Action Network coalition supports collaboration between diverse community partners around cancer prevention and control. Our esteemed healthcare systems and centers provide world-class treatment and care to cancer survivors, caregivers, and their families. And ordinary Utahns contribute with their generosity and faith in the possibility of a cancer-free state.

The 2021-2025 Utah Comprehensive Cancer Prevention and Control Plan continues this noble fight. This is the fifth comprehensive cancer plan for the state of Utah, and it will allow us to make a positive impact on the lives of those affected by cancer. The plan includes components from five of the priorities in the One Utah Roadmap — economic advancement, education innovation, and investment, rural matters, health security, and equality and opportunity — that guide my administration to best serve the people of Utah.

By working together and using this plan, we can increase awareness of how to prevent cancer, detect cancer early, and improve the quality of life for every cancer survivor in our state. Together, we can help all Utahns live happier, healthier lives.

Sincerely,

Spencer J. Cox
Governor

Utah State Capitol, Suite 200 • P.O. Box 142220 • Salt Lake City, Utah 84114-2220 • Telephone (801) 538-1000

Utah CANCER Action Network

Partner | Prevent | Advocate | Survive

November 30, 2021

Dear Utahns,

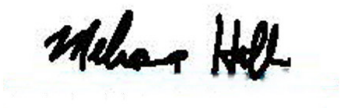
Cancer is an issue that affects all of us. More than 115,000 Utahns – family, friends, neighbors, and even members of our coalition – are cancer survivors. Thousands more Utahns have died from cancer, which is the second-leading cause of death in the state.

The Utah Cancer Action Network (UCAN) has been in the fight to reduce the burden of cancer in Utah since 2001. UCAN seeks to reduce cancer incidence and mortality through prevention and control, partnerships, advocacy, and survivorship. Our vision is that no Utahn will suffer unduly from cancer.

The 2021–2025 Utah Comprehensive Cancer Prevention and Control Plan provides an overview of cancer in Utah, identifies priority areas, and recommends strategies to address these priority areas. The four cancer priorities in this plan – food security, healthy neighborhood environments, access to health care, and financial toxicity – emphasize underlying root causes of adverse cancer outcomes while offering best practices and evidence-based strategies that will benefit those facing cancer today as well as impact cancer prevention for generations to come. The plan's goal is to impact aspects of cancer, from prevention to early detection to survivorship, while advancing efforts to eliminate cancer-related inequities across communities in Utah.

UCAN supports the 2021–2025 Utah Comprehensive Cancer Prevention and Control Plan and looks forward to convening community collaborators at both the state and local levels over the next five years to work on the strategies to address the drivers of cancer and cancer-related inequities.

Sincerely,



Dr. Melissa Hall
UCAN co-Chair

Gagan Kaur
UCAN co-Chair

Dedication

The 2021–2025 Utah Comprehensive Cancer Prevention and Control Plan is dedicated to all Utahns whose lives cancer has affected: beloved friends and family, caregivers, survivors, and those who have courageously fought and died. We honor your journey and share the vision of a healthy future where cancer is known only as an illness of the past.

Land Acknowledgement

The land on which the state of Utah exists is the ancestral and enduring homeland of the Indigenous peoples and cultures of the:

- Confederated Tribes of the Goshute Reservation
- Navajo Nation
- Northwestern Band of the Shoshone Nation
- Paiute Indian Tribe of Utah
- San Juan Southern Paiute Tribe
- Skull Valley Band of Goshute
- Ute Indian Tribe of the Uintah and Ouray Reservation
- Ute Mountain Ute Tribe

We solemnly acknowledge the historical atrocities and ongoing injustices committed against these peoples, cultures, and sovereign Nations that have led to the context in which we coexist today. We recognize these Indigenous peoples as the original caretakers of this land and respect their wisdom as paramount to achieving health and healing. We commit to act in solidarity as we strive to reduce the burden of cancer for everyone who calls this place their home.

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Executive Summary

Cancer impacts all of us. Each year, a cancer diagnosis upends the lives of thousands of Utahns and their families. Cancer affects Utahns of all ages, races, ethnicities, sexes, socioeconomic positions, geographic locations, sexual orientations, gender identities, abilities, national origins, political affiliations, and creeds. Tragically, thousands of Utahns die from cancer each year.

There are many ways to reduce the risk of cancer, increase cancer survival, and improve quality of life for those with cancer. These include eating a healthy diet, engaging in regular physical activity, avoiding or quitting tobacco products, receiving vaccines that prevent cancer, and following the recommended schedule for appropriate cancer screenings.

Unfortunately, social, economic, and political factors often influence whether Utahns are able to adopt these approaches to reduce their risk of cancer or lessen the impact of cancer after a diagnosis. For example:

- Many Utah households and even entire communities lack access to affordable healthy food options
- Many Utah neighborhoods lack adequate green space or walkability components that support regular physical activity
- Many Utahns are unable to receive needed vaccines, cancer screenings, or other cancer-related healthcare services due to insurance status, transportation obstacles, or community disinvestment

Social, economic, and political factors unjustly increase the cancer risk for many communities throughout the state, a gross inequity that is avoidable through policy, systems, and environmental reforms that provide all Utahns with fair and just access to opportunities for cancer prevention and control.

The 2021–2025 Utah Comprehensive Cancer Prevention and Control Plan serves as a roadmap to eliminate cancer inequities and reduce the burden of cancer in Utah. The plan outlines four scientifically-supported and equity-focused cancer priorities:

- Increase food security among Utahns
- Create healthy neighborhood environments in Utah
- Improve access to high-quality healthcare services for all Utahns
- Reduce financial toxicity among Utah cancer survivors

Each priority includes the evidence that underpins its selection, as well as strategies, targets for change, and action steps to guide organizations and individuals across the state to improve access to opportunities that will reduce the statewide cancer burden.

Cancer may be a cruel and complex disease, but Utah has both the tools and the resolve to lower the statewide burden of cancer and help all Utah families, friends, and communities to lead longer and healthier lives.

Introduction to the Plan

Vision

A cancer-free Utah in which families, friends, and neighbors can together lead long and healthy lives.

Mission

To prevent cancer for every Utahn while supporting those who are cancer survivors.

Guiding Purpose

Cancer is a cruel and complex disease that touches everyone and requires bold action to prevent, fight, and end.

Mission-Oriented Goals

1. Center local communities in every effort to prevent and control cancer
2. Emphasize primary prevention, social justice, and health equity
3. Pursue multi-sector partnerships and collaborations
4. Advance evidence-based policy, systems, and environmental (PSE) changes
5. Collect high-quality data that reflects the multi-faceted diversity of Utah

Plan Development Process

Mar 2020	The Utah Comprehensive Cancer Control Program (CCC) held a workshop with Utah Cancer Action Network (UCAN) coalition partners and other community partners to propose ideas for the 2021–2025 plan
Apr–Jun 2020	CCC drafted an outline of the 2021–2025 plan
Jul 2020	CCC solicited feedback on the outline of the 2021–2025 plan from internal, external, and UCAN coalition partners
Aug 2020–Mar 2021	CCC drafted content for the 2021–2025 plan
Apr–Jul 2021	CCC solicited feedback on the priorities of the 2021–2025 plan from internal, external, and UCAN coalition partners
Aug–Oct 2021	CCC held a comment period on the 2021–2025 plan for any and all interested organizations and individuals
Nov 2021	CCC published the 2021–2025 plan

How to Use the Plan

The 2021–2025 Utah Comprehensive Cancer Prevention and Control Plan (State Cancer Plan) concentrates on four cancer prevention and control priorities that cut across the cancer control continuum and aim to achieve the vision of a cancer-free Utah. The four priorities are:

- Increase food security among Utahns
- Create healthy neighborhood environments in Utah
- Improve access to high-quality healthcare services for all Utahns
- Reduce financial toxicity among Utah cancer survivors

Each priority includes strategies, targets for change, and action steps:

Strategies	Targets for Change	Action Steps
methods to equitably reach the priority; intended to benefit all Utahns including cancer survivors, caregivers, and their families	measureable outcomes expected for Utah upon successfully implementing the strategies	examples of specific policy, systems, and environmental (PSE) change initiatives that individuals and organizations can do to equitably implement the strategies

CCC relies on partnerships with UCAN and community-based organizations to implement the 2021–2025 State Cancer Plan. CCC provides grant funding to community-based organizations that propose new or manage existing projects aligned with the priorities and strategies in the 2021–2025 State Cancer Plan. Grantees lead these community-centric projects, develop work plans that outline project activities, recruit project partners, and evaluate project efforts while CCC and UCAN oversee the projects, provide guidance and funding support, offer opportunities to share results, and ensure alignment with the 2021–2025 State Cancer Plan. This project-based approach provides grantees with the flexibility to choose what to work on and how to approach their work. These grants are available to local health departments, healthcare systems, faith-based organizations, coalitions, government entities, and a wide array of non-profits and other community-based organizations across Utah.

Past grantees include:

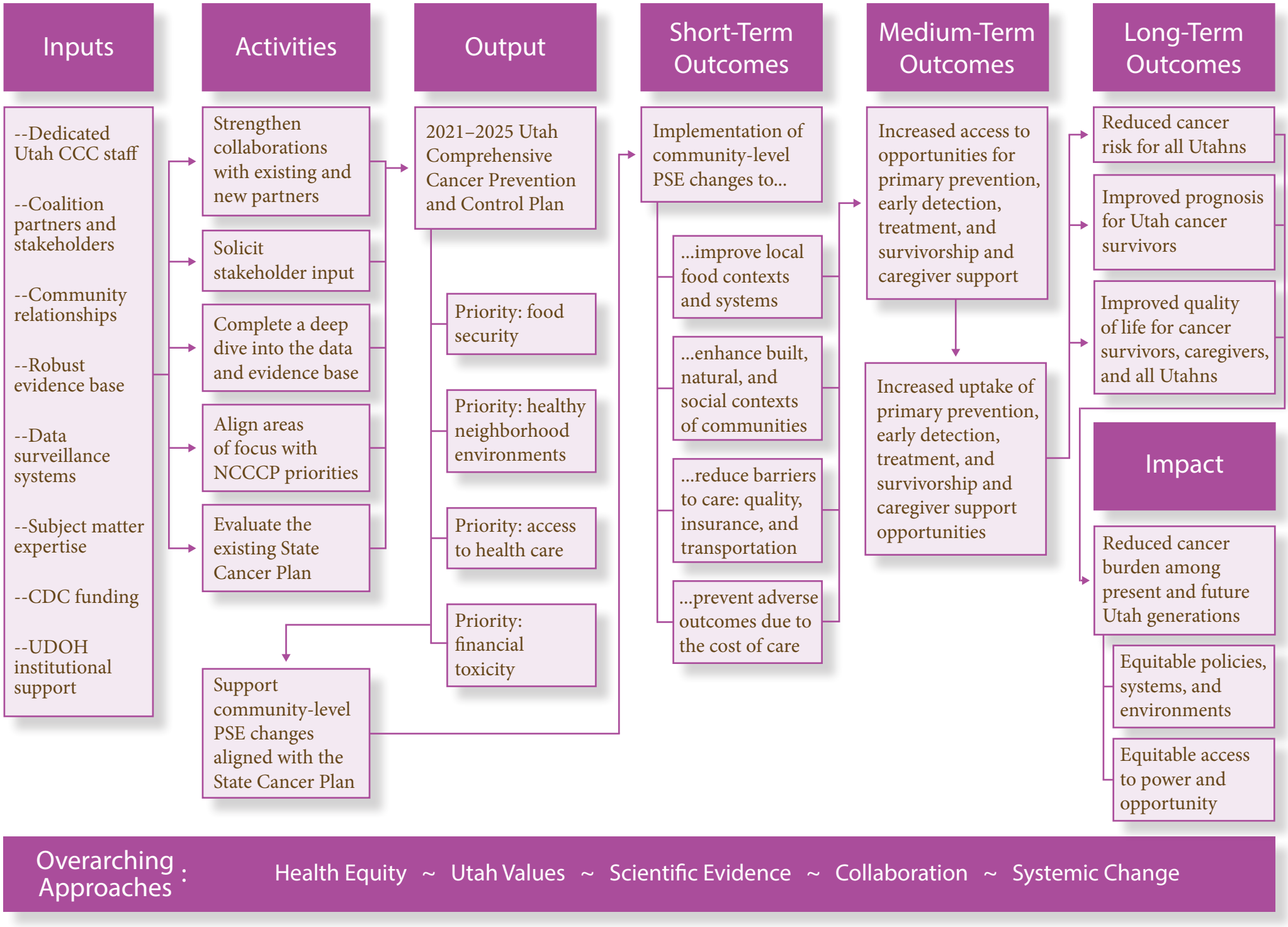
- *Alliance Community Services*
- *Get Healthy Utah*
- *Huntsman Cancer Institute*
- *International Rescue Committee*
- *Ogden Civic Action Network*
- *Wasatch Community Gardens*
- *Wasatch County Health Department*

Many components of the priorities are also applicable to other programs within the Utah Department of Health. CCC is eager to collaborate with other internal programs to share subject matter expertise, braid funding, and work together on these important public health efforts.

Evaluation of the Plan

CCC will evaluate the implementation and impact of the 2021–2025 State Cancer Plan using a mixed methods approach. The evaluation will align with the logic model for the plan (Figure 1). Briefly, CCC will work with UCAN to examine changes to the baseline data in the targets for change and conduct interviews with community stakeholders around the strategies and action steps for each of the four priorities. After interpreting this quantitative and qualitative data, CCC and UCAN will disseminate the findings via the UCAN website.

FIGURE 1 Logic Model for the 2021–2025 Utah Comprehensive Cancer Prevention and Control Plan



Cancer Burden in Utah

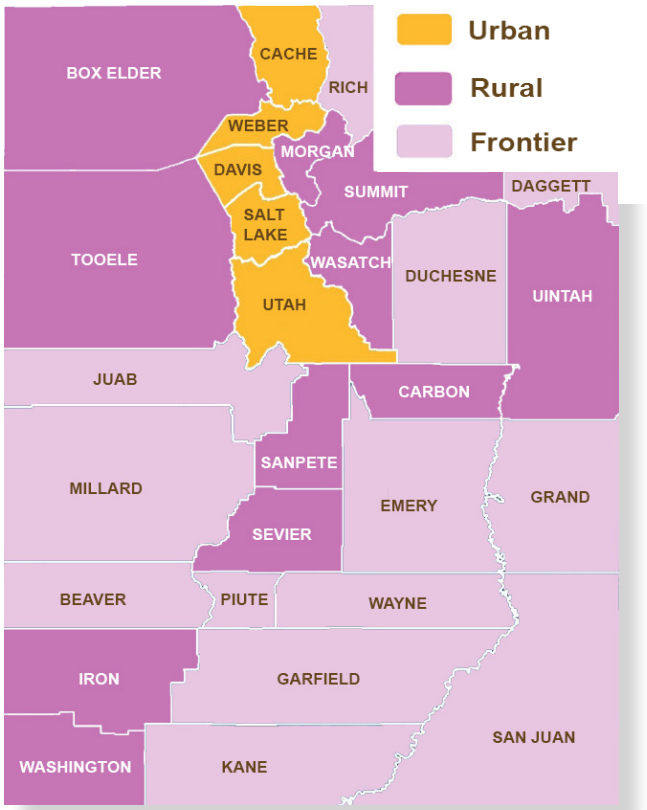
Utah Demographics

In 2020, Utah had an estimated population of 3,271,616.[1] The Utah population continues to grow rapidly each year and has increased 18.4% since 2010, more than double the national increase of 7.4%.[1] Approximately two-thirds of this growth is attributable to in-state births, while the remainder is attributable to migration from other U.S. states or other countries.[2] Utah is the "youngest" state in the nation, with the lowest median age of 31.3 years compared with the national median age of 38.4 years in 2019.[3]

Utah population in 2020: 3,271,616

Utah is the 13th largest state in terms of geographic size, however, 75% of state residents live in four counties along the Wasatch Front: Salt Lake, Utah, Davis, and Weber counties.[4] Thirteen of the 29 counties in Utah are classified as frontier, 11 are classified as rural, and the remaining 5 counties are classified as urban (Figure 2).[5]

FIGURE 2 Counties in Utah by Geographic Classification



Source: Utah Office of Primary Care and Rural Health

Utah is home to people of many different races and ethnicities (Table 1).[6] There is also a significant refugee population, with Utah resettling more than 9,100 refugees since 2010.[7] Approximately 8.5% of Utahns are foreign-born.[4]

TABLE 1 Summary of Utah Race/Ethnicity Demographics, 2019

	Race/Ethnicity	Number of Population	Percent of Population[a]
Non-Hispanic	White	2,493,759	77.8%
	Black or African American	38,056	1.2%
	American Indian or Alaska Native	30,401	0.9%
	Asian	81,646	2.5%
	Native Hawaiian or Other Pacific Islander	31,393	1.0%
	Two or More Races	68,652	2.1%
	Hispanic or Latino	462,051	14.4%

[a]percentages do not sum to 100% due to rounding

Source: Population Estimates by Age, Sex, Race, and Hispanic Origin for Counties in Utah, U.S. Bureau of the Census, IBIS Version 2019

Cancer Incidence, Mortality, and Survivorship in Utah

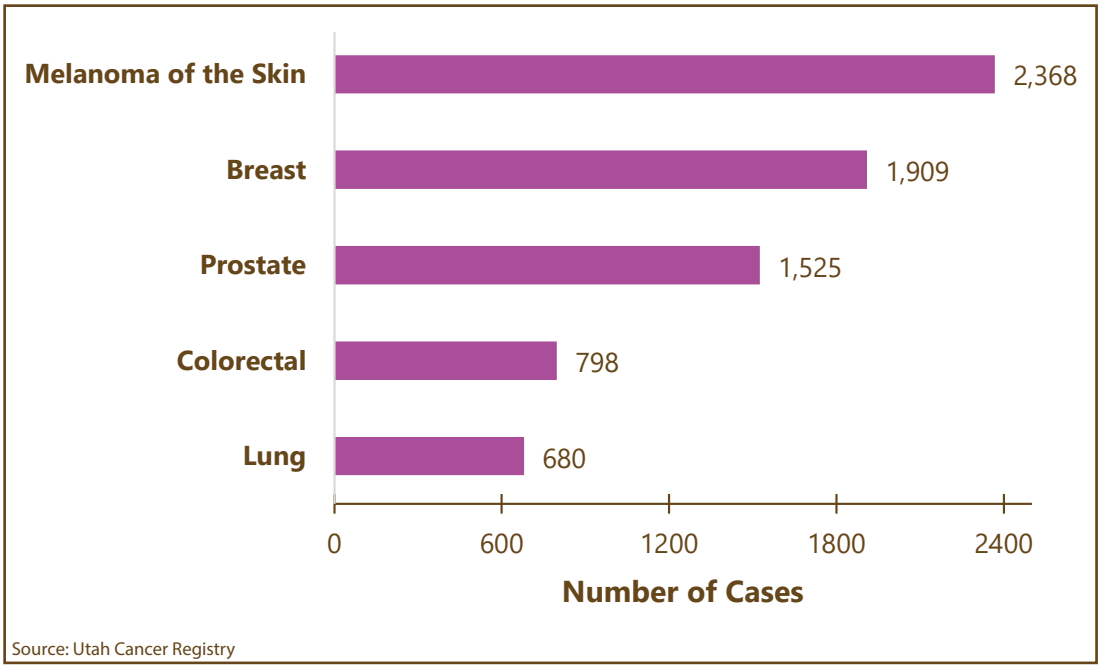
Across the U.S., approximately two in five people will be diagnosed with cancer in their lifetimes and approximately one in five people will die as a result of cancer.[8]

Incidence: In 2017, 13,604 Utahns were diagnosed with cancer, either invasive or in situ, or the equivalent of about 37 new cancer diagnoses each day.[9] Approximately 63% of these diagnoses occurred in Utahns 60 years or older.[9]

In 2017, an average of 37 Utahns were diagnosed with cancer each day

Prostate cancer was the most common cancer diagnosed among men in Utah, while breast cancer was the most common cancer diagnosed among women in Utah.[9] The five most commonly diagnosed cancers overall were melanoma, breast, prostate, colorectal, and lung (Figure 3).[9]

FIGURE 3 Top Five Leading Cancers in Utah by Number of New Cases, 2017



Source: Utah Cancer Registry

The 2013–2017 cancer incidence rate in Utah was significantly lower than the U.S. cancer incidence rate, after adjusting for age (487.1 vs 504.9 cases per 100,000 population).[9] The incidence rates for many tobacco-related cancers were dramatically lower in Utah compared to the U.S.[9] Utah did, however, have a higher incidence rate than the U.S. for a few cancer sites including melanoma of the skin, testicular cancer, and thyroid cancer.[9]

For some cancer sites, there were disparities in incidence rates by race/ethnicity and county classification as urban or rural, after adjusting for age.[9] From 2013–2017:

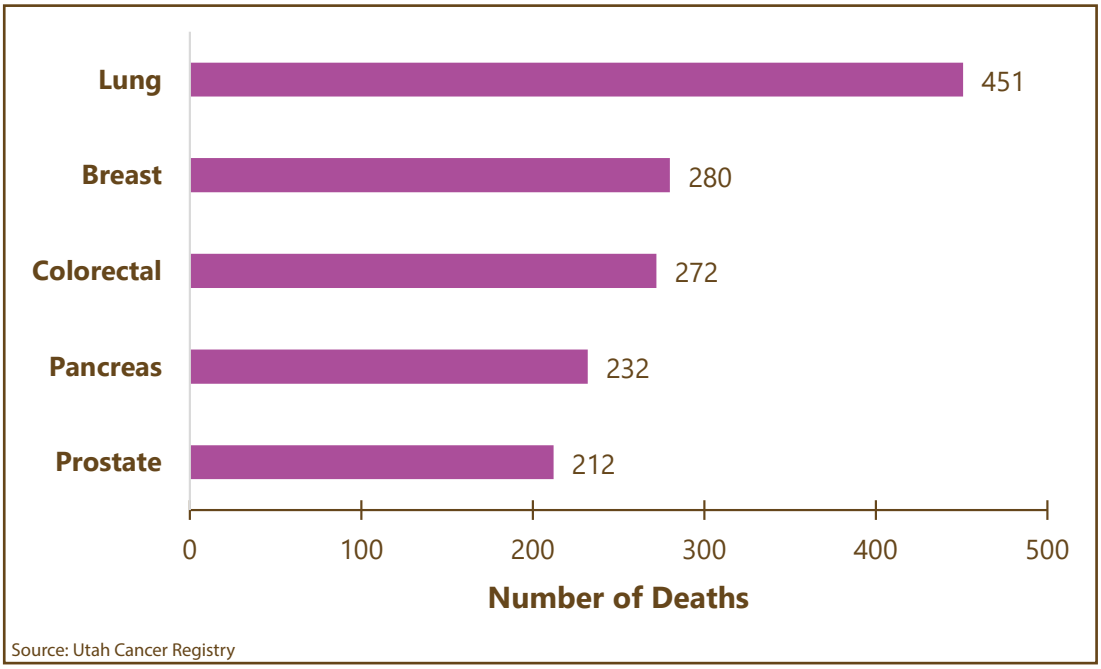
- Utah residents who are Hispanic had a significantly higher incidence of liver, stomach, and kidney cancers and a significantly lower incidence of bladder cancer and melanoma of the skin compared with Utah residents who are non-Hispanic White.[9]
- Rural populations had a significantly higher incidence of lung cancer and leukemia and a significantly lower incidence of endometrial (uterine), brain and nervous system, and breast cancers compared to urban populations in Utah.[9]

Mortality: In 2017, 3,160 Utahns died from cancer, or the equivalent of between eight and nine cancer deaths each day.[9] This made cancer the second-leading cause of death in Utah, exceeded only by heart disease.[9]

In 2017, an average of 8–9 Utahns died from cancer each day

Lung cancer was the leading cancer cause of death for men in Utah, while breast cancer was the leading cancer cause of death for women in Utah.[9] The five cancers responsible for the most deaths overall were lung, breast, colorectal, pancreas, and prostate (Figure 4).[9]

FIGURE 4 Top Five Leading Cancers in Utah by Number of Deaths, 2017



Source: Utah Cancer Registry

The 2013–2017 cancer mortality rate in Utah was significantly lower than the U.S. cancer mortality rate, after adjusting for age (125.5 vs 158.6 deaths per 100,000 population).[9] The mortality rates for many tobacco-related cancers were dramatically lower in Utah compared to the U.S.[9] Utah did, however, have a higher mortality rate than the U.S. for melanoma of the skin, thyroid cancer, and ovarian cancer.[9]

For some cancer sites, there were disparities in mortality rates by race/ethnicity and county classification as urban or rural, after adjusting for age.[9] From 2013–2017:

- Utah residents who are Hispanic had significantly higher mortality from liver and stomach cancers and significantly lower mortality from breast, prostate, and brain and nervous system cancers than Utahns who are non-Hispanic White.[9]
- Rural populations had significantly higher mortality from lung and endometrial (uterine) cancers and significantly lower mortality from melanoma of the skin and brain and nervous system cancers compared to urban populations in Utah.[9]

Survivorship: Cancer survivorship begins at diagnosis and extends through the rest of life.[10] Cancer survivors include those who are undergoing treatment, have completed treatment, or are receiving palliative or hospice care either temporarily or for the remainder of their lives.[10]

The number of cancer survivors in Utah continues to grow. As of January 2019, an estimated 115,840 cancer survivors were living in Utah.[10] This indicates that between 3% and 4% of all Utahns are cancer survivors.

More than 115,000 cancer survivors live in Utah

In 2019, the national five-year cancer survival rate was 67%, which indicates that approximately two in three people diagnosed with cancer were living at least five years beyond their diagnosis.[11] The five-year cancer survival rate differs widely by cancer site. Some cancer sites have five-year survival rates below 25% while others have five-year survival rates above 90%.[12]

Comprehensive data on cancer incidence, mortality, survivorship, and other aspects of the cancer burden in Utah are available in the most recent Cancer in Utah report by the Utah Cancer Registry.[9]

Cancer Risk and Protective Factors in Utah

Cancer risk and protective factors include physical activity, diet, tobacco use, environmental exposures, and uptake of cancer preventive and early diagnostic healthcare services.[13]

Physical Activity: Achieving recommended physical activity levels is associated with a reduced risk of cancer and improved outcomes for cancer survivors.[13,14] In 2019:

- 24.9% of all Utah adults, 27.7% of Utah adult cancer survivors, and 21% of Utah high schoolers reported reaching the respective recommended weekly levels of physical activity.[15,16]
- 18.5% of all Utah adults, 22.0% of Utah adult cancer survivors, and 8.5% of Utah high schoolers were classified as completely physically inactive.[15,16]

Diet: Eating a diet filled with a variety of plant-based foods such as fresh fruits, vegetables, whole grains, and legumes while avoiding highly processed foods is tied to a lower cancer risk.[13] In 2019:

- 30.5% of Utah adults and 26.7% of Utah high schoolers ate the recommended two or more servings of fruits on average per day.[15,16]
- 12.5% of Utah adults and 12.4% of Utah high schoolers ate the recommended three or more servings of vegetables on average per day.[15,16]

Tobacco Use: Tobacco use is the leading cause of preventable cancer-related death in the U.S. and is associated with adverse outcomes for cancer survivors.[13] In 2019:

- 7.9% of all Utah adults and 8.3% of Utah adult cancer survivors were current cigarette smokers; 3.4% and 2.8% were smokeless tobacco users, respectively.[15]
- 10% of Utah high schoolers had used any form of tobacco (excluding electronic vapor products) in the previous 30 days.[16]

UV Radiation: Avoiding unhealthy exposure to ultraviolet (UV) radiation, from both the sun and artificial tanning sources, protects against skin cancer.[13] In 2012, 65.1% of Utah adults typically practiced one or more sun safety measures when outside while 34.9% always or nearly always wore sunscreen when outside.[15] In 2019, 5.9% of Utah high schoolers had used an artificial tanning source in the past 12 months.[16]

Radon: Exposure to radon gas is the primary cause of lung cancer among nonsmokers and the second-leading cause of lung cancer.[17] High radon levels are detected by testing and cleared by installing a radon mitigation system.[17] In 2016, 19.3% of Utahns reported their home had been tested for radon.[15]

HPV and HBV Vaccines: The human papillomavirus (HPV) and Hepatitis B virus (HBV) vaccines prevent cancer.[13] In 2019:

- 68.8% of Utahns ages 13–17 had received at least one dose of the HPV vaccine and 44.6% were up-to-date on the vaccine series.[18]
- 88.1% of Utahns ages 13–17 were fully vaccinated against HBV.[18]

Cancer Genomics: Several genetic tumor predisposition conditions, such as hereditary breast and ovarian cancer (HBOC), increase the risk of developing certain cancer types.[13,19] Genetic testing is an effective tool to inform decisions that mitigate cancer risk.[19] As of 2018, 8.7% of Utah adults had discussed genetic testing with a healthcare provider and, of them, 29.1% had undergone such testing.[15]

Cancer Screening: Screening for colorectal, breast, cervical, and lung cancers is effective at detecting cancer early, which is associated with improved outcomes for cancer survivors.[13] In 2019:

- 70.0% of eligible Utahns had undergone a recommended colorectal cancer screening.[15]
- 71.5% of eligible Utahns had undergone a recommended breast cancer screening.[15]
- 68.8% of eligible Utahns had undergone a recommended Pap test to screen for cervical cancer.[15]
- Data on lung cancer screening among eligible Utahns is currently unavailable.

There are significant disparities across many of these cancer risk and protective factors in Utah (Table 2).[15,16] For instances where the evidence does not indicate the presence of a disparity, this may be due to data limitations (e.g., small sample size, unavailable data) or because a disparity truly does not exist.

TABLE 2 Disparities for Selected Cancer Risk and Protective Factors in Utah

	Race/Ethnicity	Urban/Rural/ Frontier Location	Household Income	Formal Education (age 25+)	Sexual Orientation	Gender Identity	Disability Status	Sex
Physical Activity	✓	✓	✓	✓	✓	*	✓	✓
Diet	✓	✓	✓	✓		*	✓	✓
Tobacco Use	✓	✓	✓	✓	✓	*	✓	✓
Radon Testing		✓	✓					
Cancer Screenings	✓	✓	✓	✓	✓	*	✓	

✓ = age-adjusted, statistically significant disparity at p<0.05
* = data is collected but sample size is too small to analyze

Source: Utah Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health

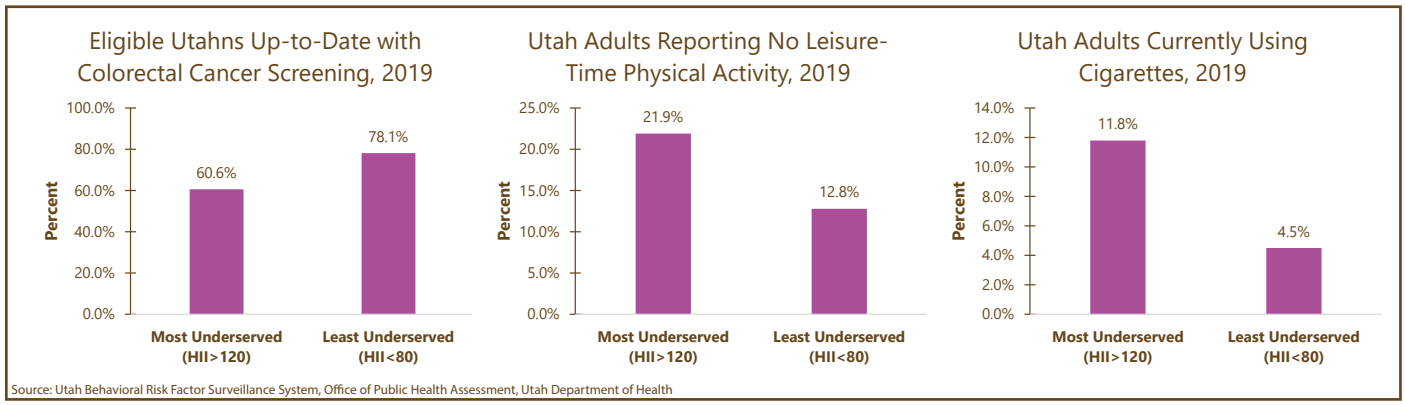
Health Equity

Disparities in cancer incidence, mortality, survivorship, and risk and protective factors exist across Utah (see previous section on Cancer Burden in Utah). The burden of these disparities falls disproportionately on some Utah communities more than others. When these disparities arise due to specific communities being systematically denied the opportunities to lead healthier lives, they rise to the level of being health inequities.[20]

Today, many underserved and underrepresented Utah communities experience health inequities related to cancer. These communities have historically experienced and often continue to experience discrimination, marginalization, and disinvestment within social, economic, and political systems.[20] This has unfairly lowered access to cancer prevention and control resources for these Utahns, thereby limiting available opportunities to reduce cancer risk relative to their counterparts in better-resourced communities (Figure 5).[15] This ultimately increases the number of Utahns who develop, die from, or lose a family member or friend to cancer; an increase that is avoidable by working to eliminate health inequities in pursuit of greater health equity.

Health inequities are increasing the burden of cancer across Utah, an increase that is avoidable

FIGURE 5 Age-Adjusted Uptake of Selected Cancer Risk and Protective Factors Among Utah Adults by Geographic Small Area Health Improvement Index (HII) Score, 2019



Source: Utah Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health

Health equity is achieved when everyone has fair and just access to opportunities to achieve the best possible health.[20] Achieving health equity requires addressing the social, economic, and political factors that determine health, including food security, environmental quality, access to health care, presence of discrimination, opportunities for economic mobility, and representation in positions and places of power.[20] These factors influence the statewide burden of cancer in numerous ways. For example:

- Lower food security and underserved environments offer fewer opportunities to adopt and maintain cancer prevention behaviors such as a healthy diet, physical activity, and sun safety.
- Lower access to health care limits opportunities for Utahns to receive HPV vaccines or cancer screenings.
- Fewer household socioeconomic resources reduces the ability of families to pay for cancer-related care.

Social, economic, and political factors in Utah hold a commanding influence over available cancer prevention and control opportunities, the creation of health inequities, and the overall statewide cancer burden. Any effort to prevent and control cancer in Utah must consider these factors in order to eliminate health inequities and reduce the burden of cancer for Utah families, friends, and communities across the entire state.

A health equity approach is crucial to reduce the burden of cancer in Utah

Utah Cancer Prevention and Control Priorities

The four priorities in this plan reflect the goal of the Utah Comprehensive Cancer Control Program (CCC) to achieve meaningful and lasting impact on cancer prevention and control in Utah over the next five years and beyond. Together, they stem from the priorities of the National Comprehensive Cancer Control Program (NCCCP) of the Centers for Disease Control and Prevention (CDC) to emphasize primary prevention of cancer, promote early detection and treatment of cancer, and support cancer survivors and caregivers in a way that advances health equity, evaluates rigorously, and pursues changes to policies, systems, and environments.[21]

The four priorities for the 2021–2025 Utah Comprehensive Cancer Prevention and Control Plan are:

Priority	Priority
Increase Food Security Among Utahns	Create Healthy Neighborhood Environments in Utah
Priority	**Priority**
Improve Access to High-Quality Healthcare Services for All Utahns	Reduce Financial Toxicity Among Utah Cancer Survivors

These four priorities were developed to better understand and target the root causes of adverse cancer outcomes in Utah. As such, each priority contains cancer-focused strategies that also align with the interests of other areas and reflect opportunities for partnership and collaboration (Table 3). While each priority delves into specific issues that drive cancer-related inequities and poor health outcomes in Utah, each priority alone does not provide a complete picture. Through collectively addressing the issues identified across all four priorities, Utah can achieve a more equitable, effective, and sustainable approach to cancer prevention and control.

What does success look like? Addressing the four priorities in this plan through the next five years and beyond will ultimately allow every cancer survivor, caregiver, and all other Utahns—regardless of who they are—the opportunity to enjoy a reduced risk of cancer, an improved cancer prognosis, and a better quality of life. All Utahns will have equitable access to fresh, culturally appropriate foods that allow them to make healthier food choices. Residents of every neighborhood will live in an environmental context that promotes health, with equitable opportunities for physical activity, sun safety, and clean air. Every Utahn across the state will be able to access affordable, high-quality cancer prevention and early detection services and survivorship care. Cancer survivors, caregivers, and their families will have their physical, mental, emotional, financial, familial, and social needs met. And, all Utahns will be able to take comfort in the knowledge that their children, grandchildren, and generations to come will experience the same.

TABLE 3 Examples of Collaboration Opportunities Between Cancer and Other Topic Areas Around the Strategies in Each Priority

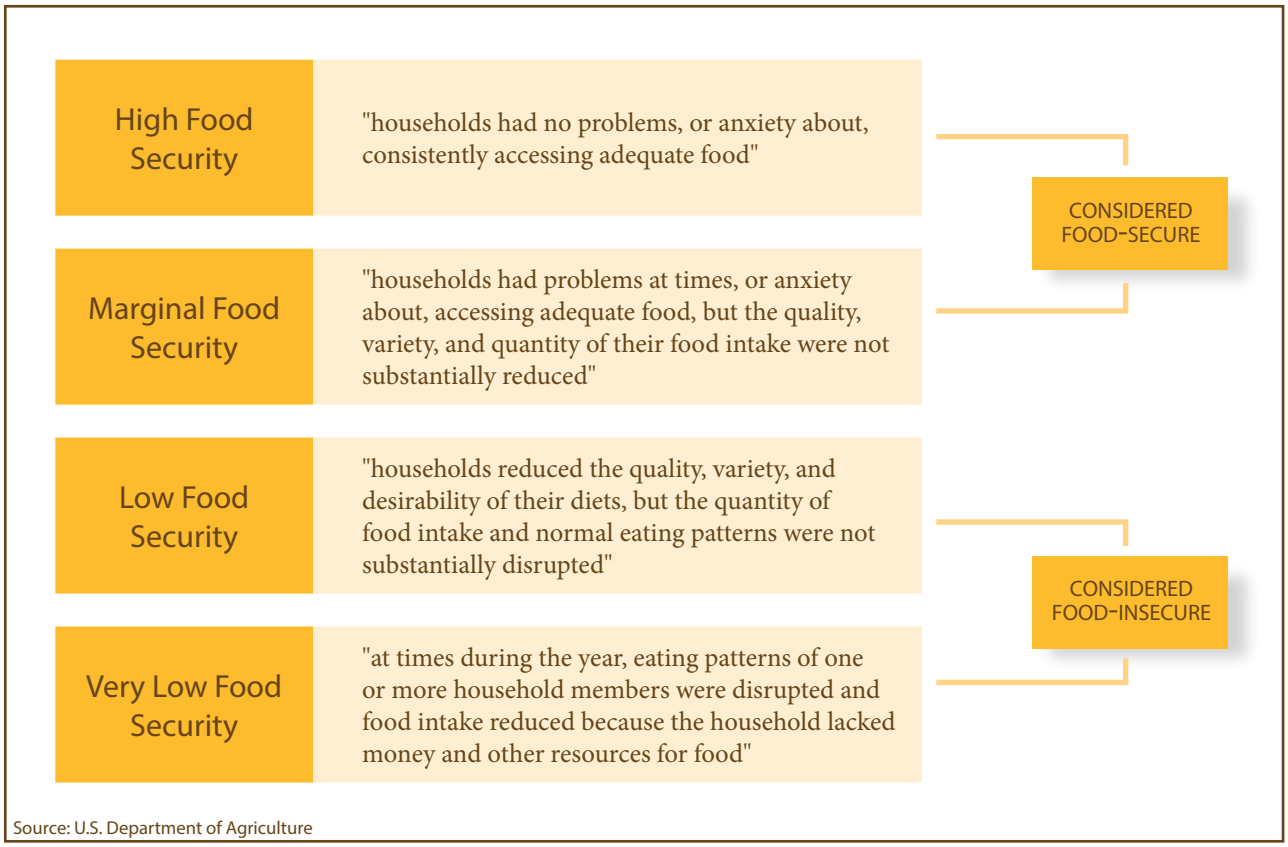
Strategies for...	Food Security	Healthy Neighbohood Environments	Access to Health Care	Financial Toxicity
Air Quality		✓		
Behavioral Health	✓	✓	✓	✓
Bias in Health Care			✓	
Civic Participation	✓	✓	✓	✓
Clinical Services (e.g., cancer screenings, HPV vaccine)			✓	✓
Criminal Justice	✓	✓	✓	✓
Community Design	✓	✓	✓	
Diet/Nutrition	✓	✓		
Disability	✓	✓	✓	✓
Economic Opportunities	✓			✓
Education (formal)	✓		✓	✓
Environmental Justice	✓	✓		
Food Choice	✓	✓		✓
Food Systems	✓			
Health Insurance			✓	✓
Healthcare Affordability			✓	✓
Healthcare Workforce			✓	✓
Housing	✓	✓		✓
Hunger	✓			
Maternal and Child Health	✓	✓	✓	✓
Obesity	✓	✓		
Physical Activity		✓		
Radon		✓		
Rural Health	✓	✓	✓	✓
Survivorship	✓	✓	✓	✓
Telehealth			✓	✓
Tobacco Use	✓	✓	✓	✓
Transportation		✓	✓	
UV Exposure		✓		
Violence Prevention	✓	✓		✓

Increase Food Security Among Utahns

Introduction

Eating a diet filled with plant-based foods, whole grains, and fiber is associated with a lower risk of colorectal, oropharyngeal, and other cancers.[13] Many Utahns face barriers to find, purchase, and eat these healthy foods, however, which elevates their risk of developing cancer. These Utahns experience lower levels of food security, defined as the perceived or actual ability to physically access and financially afford enough healthy, nutritious, and culturally appropriate food (Figure 6).[22]

FIGURE 6 U.S. Department of Agriculture (USDA) Definitions: Food Security



Source: U.S. Department of Agriculture

From 2017–2019, an average of 10.7% of Utah households were food-insecure and reported difficulty accessing nutritious foods.[23] This burden falls disproportionately on various communities throughout the state. For example, in 2019:

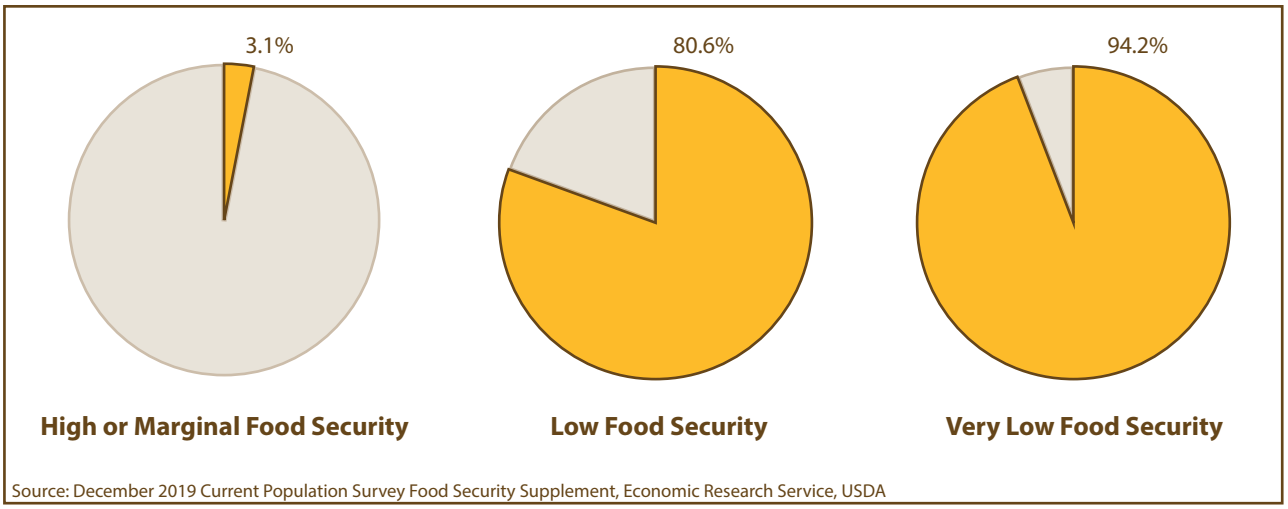
- 19.9% of individuals in households earning less than $25,000 per year reported they were food-insecure compared to 1.8% of individuals in households earning over $75,000 per year.[15]
- 18.3% of Utahns with disabilities reported being food-insecure, more than triple the 5.0% of those without disabilities.[15]
- The prevalence of low or very low food security differed across counties in Utah, from fewer than 10% of individuals in some counties to nearly 20% of individuals in others.[24]

Approximately one in 10 Utah households experienced low or very low food security during 2017–2019

Due to the unprecedented disruption of COVID-19 on all aspects of daily life, thousands of additional Utah households have collectively seen their food security diminish. The Utah Food Bank has tripled the amount of food it supplies, from approximately two million pounds of food per month before the pandemic to six million pounds of food per month during the pandemic.[25] Schools across the state have also reported enormous upticks in the amount of food and free meals provided to food-insecure households.[25]

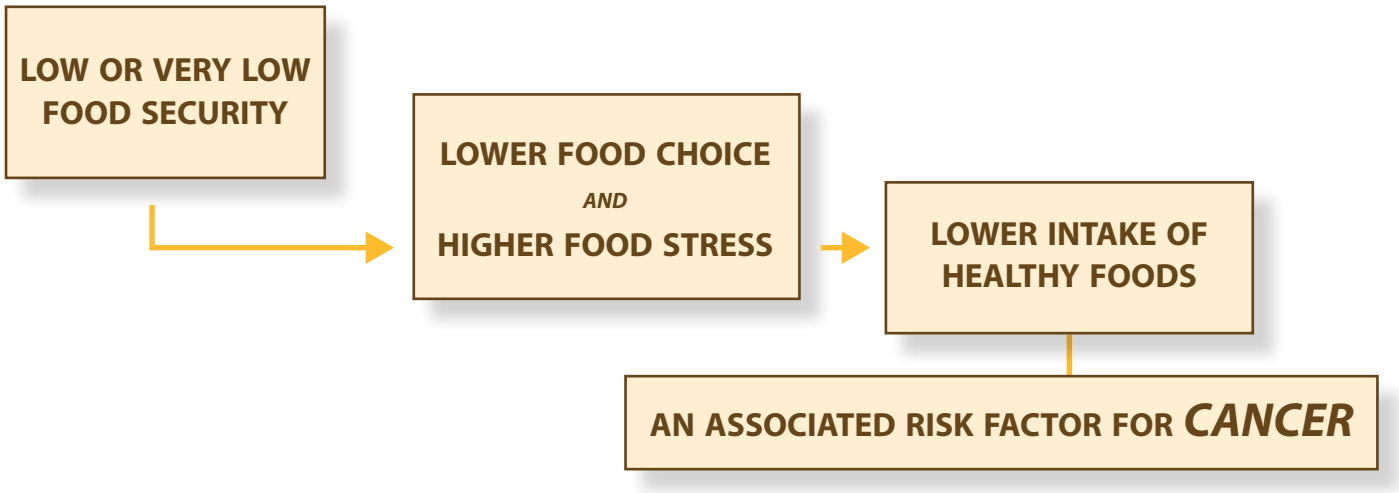
Low and very low food security often lead to limited food choice and higher food-related stress, which leads to lower intake of healthy foods.[26,27] Approximately 94% of households with very low and 80% of households with low food security reported in 2019 they could not afford to eat nutritious, well-balanced meals (Figure 7).[26]

FIGURE 7 Percent of Households That "Could Not Afford Balanced Meal," 2019



Source: December 2019 Current Population Survey Food Security Supplement, Economic Research Service, USDA

Unsurprisingly then, lower levels of food security are associated with a significantly increased risk of cancer, even after controlling for socioeconomic metrics.[27,28] For example, among working-age adults in households at or below 200% of the Federal Poverty Line (FPL), those with low or very low food security face more than double the risk of cancer compared to their counterparts with high food security.[28]



Cancer survivors face additional adverse outcomes related to food security. Food-insecure cancer survivors have higher rates of treatment nonadherence than food-secure cancer survivors, which jeopardizes treatment efficacy and survivor prognosis.[27,29] In addition, the financial toll cancer survivors often experience after a diagnosis can worsen food security, even among survivors who were already food-insecure.[27] Many cancer survivors in active treatment also experience treatment-induced barriers to food choice and consumption of healthy foods that resemble how low or very low food security manifests, regardless of their actual level of food security.

Food-insecure cancer survivors are less likely to be able to adhere to their cancer treatment

Reduced food security is an inherent construct of our societal institutions, rooted in policies, systems, and environments that create inequity. These inequitable policies, systems, and environments exert their adverse influence along a continuum from immediate individual food needs to community barriers to public policy shortcomings.[30] Access to emergency food services such as food pantries, as well as the specific foods available in these spaces, influence whether food-insecure Utahns receive enough to eat in a timely manner. Community capacity to grow and purchase healthy foods, such as through farmers markets or involvement in the local food system, contributes to food access, affordability, and choice. State and local policies affect the reach and impact of financial assistance programs, such as the Supplemental Nutrition Assistance Program (SNAP), and can create pathways that either increase or limit access to healthy foods in schools and communities.

Inequitable policies, systems, and environments lead to lower food security

Strategies

Strategies describe the selected methods to equitably reach the priority. They aim to benefit all Utahns including cancer survivors, caregivers, and their families.

Strategy A	Increase the availability of healthy and culturally appropriate foods that promote food choice for food-insecure populations
Strategy B	Connect food-insecure populations to financial assistance programs that make healthy foods more affordable
Strategy C	Support access to the emergency food system (e.g., food pantries) for food-insecure Utahns experiencing urgent food needs
Strategy D	Promote opportunities to advance community stewardship of the local food system

Targets for Change

Targets for change represent the measureable outcomes expected for Utah upon successful implementation of the strategies.

Decrease the proportion of Utah households with low or very low food security	
10.7%	9.6%
Baseline (2017-2019)	Target (2023–2025)
Data Source: Current Population Survey Food Security Supplement, USDA	

Decrease the proportion of Utah cancer survivors with low or very low food security	
TBD	TBD
Baseline (2021)	Target (2025)
Data Source: Utah Cancer Survivor Experiences (CASES) Survey, Utah Cancer Registry	

Overarching Vision

Equitable access to fresh, culturally appropriate foods that support healthier diets and lower the risk of cancer

Action Steps

Action steps provide examples of specific policy, systems, and environmental (PSE) change initiatives individuals and organizations can do to equitably implement the strategies. The examples listed here do not form a comprehensive list; those who implement the plan are encouraged to partner with others in their community(ies) to identify and pursue appropriate evidence-based initiatives.

Evidence-Based Action Steps Menu[27,31-33]

- Establish food pantries on college campuses for food-insecure students
- Increase food choice in the emergency food system through offering fresh, healthy, allergy-friendly, and culturally appropriate foods
- Work with community health workers at healthcare clinics to screen cancer survivors and caregivers for food security and enroll food-insecure households into community programs and resources
- Expand access to and utilization of free- and reduced meals for lower-income students
- Leverage mobile produce markets and farm stands to supply fresh, culturally varied foods to communities with otherwise limited access
- Develop, support, or expand programs that reduce the cost of fresh foods for lower-income households
- Work with grocery stores, farmers markets, and community-supported agriculture (CSA) programs to accept SNAP, WIC, Double Up Food Bucks, and other forms of financial assistance
- Connect healthcare systems with CSA programs, farmers markets, food boxes, or similar programs to serve cancer survivors, caregivers, and their families
- Establish farm-to-institution agreements between local food producers and community organizations including workplaces, schools, and hospitals
- Cultivate community garden plots in Title I schools and socioeconomically disinvested communities
- Support seed distribution programs, traditional foods initiatives, and potable water access among culturally and geographically diverse Utah communities
- Preserve and promote access to land and start-up support for young and underrepresented farmers through land banks and financial credits that prioritize resident operators
- Launch local food policy councils that convene traditionally underrepresented groups from across the food system

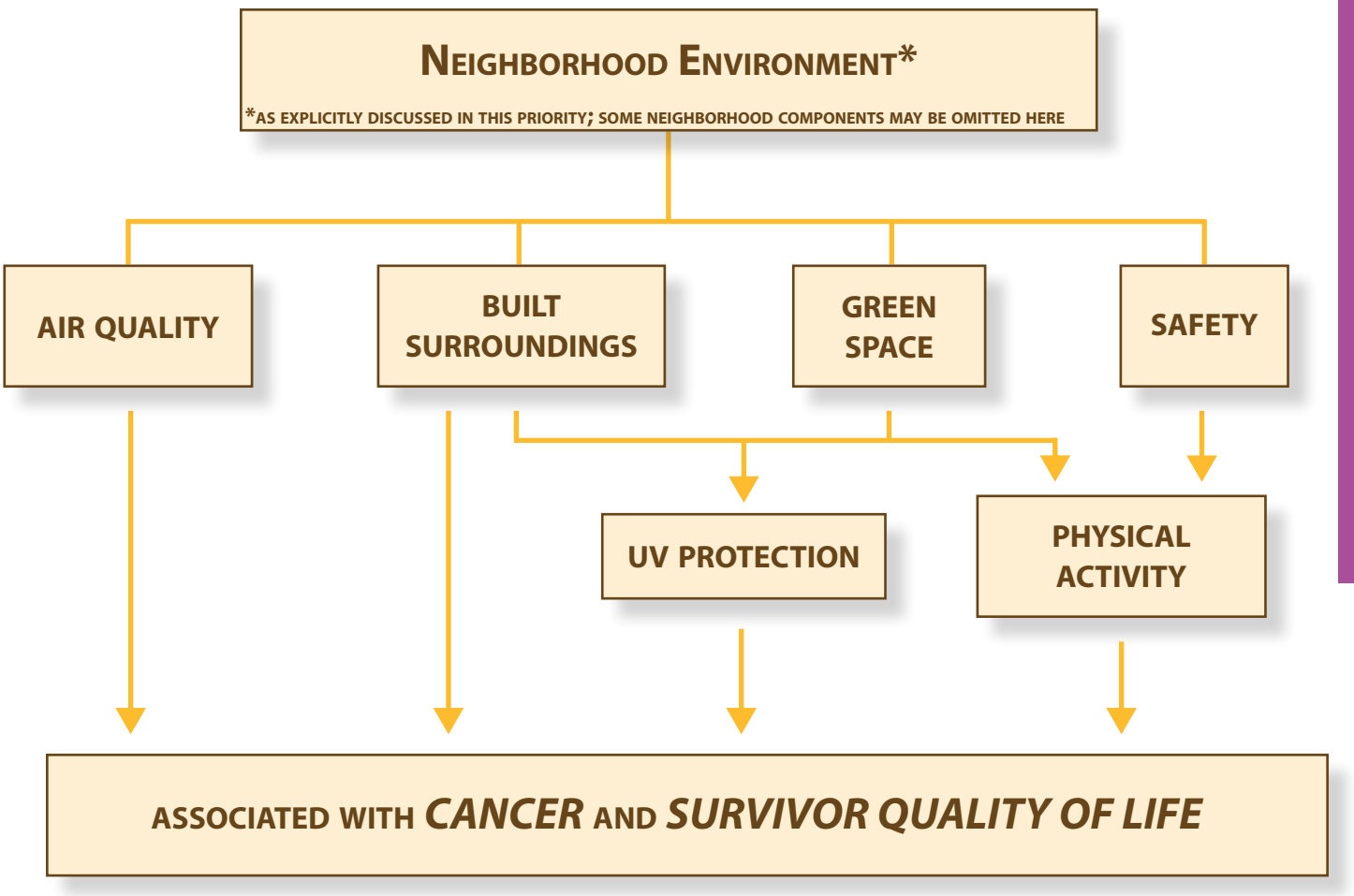
Create Healthy Neighborhood Environments in Utah

Introduction

The neighborhoods in which people live influence cancer risk in a number of ways, such as through the air they breathe, the homes they live in, and the places nearby:

- Poor air quality is associated with increased mortality from lung, colorectal, bladder, and other cancers as well as increased comorbidities among Utah cancer survivors.[34,35]
- Approximately one in three Utah homes tested for radon have elevated levels, which increases the risk to these residents of developing lung cancer.[17,36]
- The availability of local parks and green space, along with the perceived safety of these public areas, encourages local residents to engage in physical activity which lowers overall cancer risk and improves health outcomes for cancer survivors.[13,14]
- The existence of natural or built shade infrastructure also supports physical activity and reduces exposure to ultraviolet (UV) radiation from the sun, radiation that causes both melanoma and non-melanoma skin cancers.[13,37]

The COVID-19 pandemic has highlighted the significant role local neighborhood environments can have on health. As Utahns spend substantially more time in their homes and neighborhoods to work, learn, worship, and play, those who live in neighborhoods with unhealthy components now contend with the associated cancer risks throughout more of their daily lives than ever before.



Decades of discriminatory policies, systems, and community design approaches have created and maintained unhealthy neighborhood components in many Utah communities, components linked to adverse cancer outcomes.[38-40] These unhealthy components, such as poor air quality and little green space, are concentrated in neighborhoods with many people of color, Tribal members, lower-income households, and rural and frontier residents.[38-40]

Discriminatory policies, systems, and community design approaches have yielded unhealthy components in many Utah neighborhoods

For example, average air quality is measurably worse along the Wasatch Front in socioeconomically disinvested communities and neighborhoods with more Utah residents who are Black, Hispanic, and Pacific Islander compared with socioeconomically invested communities and neighborhoods with more Utah residents who are non-Hispanic White.[39] Some rural communities, such as those in the Uinta Basin, also experience worse air quality than other parts of the state.[41] Likewise, these areas are less likely to have green space and tree canopy that acts as a natural aid to air purification and also offers protection from UV radiation.[40]

Unhealthy neighborhood environments are more likely to impact:

- *people of color*
- *Tribal members*
- *lower-income households*
- *rural and frontier residents*
- *people with disabilities*

Additionally, socioeconomically disinvested, rural and frontier, and racially/ethnically diverse neighborhoods in Utah often have less well-maintained and disability-accessible active living infrastructure, such as parks and sidewalks, leaving local residents with fewer options available to be regularly active.[42-44] Even when these spaces do exist, a perceived or actual lack of safety can inhibit their use.[13,45] A majority of women and many people of color and LGBTQIA+ individuals have experienced isolated or repeated threats to their safety while engaging in outdoor activities, ranging from verbal harassment to being followed to assault.[46] These hostilities are part of a broader systemic issue of profiling, discrimination, and violence in public spaces toward people of color, Tribal members, women, LGBTQIA+ individuals, foreign-born individuals, and people with disabilities that threatens their safety and serves as a deterrent to them being active in any public setting.[46-50]

Changes to the neighborhood environment often displace lower-income residents from their homes due to higher costs

Efforts to address the unhealthy components of Utah neighborhoods must counteract the displacement pressures toward existing neighborhood residents as part of the approach. Environmental modifications are often associated with increases to cost-of-living that threaten to push out existing lower-income residents who had purportedly been intended to benefit from the changes.[51] With Utah in the midst of a statewide housing crisis, the threat of displacement is especially acute. From 2009-2019, Utah added only 70% of the residential units needed to match the increased number of households.[52] This shortage is already leading to spiking costs that make it harder for many lower-income Utahns to find housing or stay in their current homes and neighborhoods; adding healthy neighborhood components to the local environment will exacerbate this issue without proper safeguards in place.[52,53] Improving the unhealthy components of neighborhood environments is only part of the equation; ensuring healthy neighborhoods are and remain accessible and affordable is essential to prevent and control cancer in Utah.

Healthy neighborhood environments must be affordable in order to benefit all Utahns

HOUSING AFFORDABILITY

IMPROVES THE ABILITY OF LOCAL RESIDENTS TO...

→ **...REMAIN IN THEIR NEIGHBORHOOD AFTER HEALTHY COMPONENTS ARE ADDED**

→ **...ACCESS OTHER NEIGHBORHOODS THAT ALREADY HAVE HEALTHY COMPONENTS**

Strategies

Strategies describe the selected methods to equitably reach the priority. They aim to benefit all Utahns including cancer survivors, caregivers, and their families.

Strategy A	Support community-based reforms that protect neighborhood residents from unhealthy exposure to cancer risk factors (e.g., radon, UV radiation)
Strategy B	Advance initiatives that improve air quality in communities with higher exposure to air pollution
Strategy C	Incorporate disability-accessible parks, green space, and other active living infrastructure into plans for community design and development
Strategy D	Work with communities to reduce violence and the threat of violence in outdoor and community spaces
Strategy E	Protect community residents from displacement as opportunities to modify the local environment arise

Targets for Change

Targets for change represent the measureable outcomes expected for Utah upon successful implementation of the strategies.

Increase the proportion of Utah days classified as "Good" on the Air Quality Index (AQI)	
75.2%	82.0%
Baseline (2019)	Target (2025)
Data Source: Air Quality System, U.S. Environmental Protection Agency	

Increase the proportion of green space and tree canopy in Utah communities	
TBD	TBD
Baseline (2021)	Target (2025)
Data Source: EnviroAtlas, U.S. Environmental Protection Agency	

Decrease the proportion of Utahns paying 30% or more of household income on rent	
44.6%	40.1%
Baseline (2015–2019)	Target (2020–2024)
Data Source: American Community Survey, U.S. Census Bureau	

Overarching Vision

Equitable access to neighborhoods with ample opportunities for cancer prevention and health promotion

Action Steps

Action steps provide examples of specific policy, systems, and environmental (PSE) change initiatives individuals and organizations can do to equitably implement the strategies. The examples listed here do not form a comprehensive list; those who implement the plan are encouraged to partner with others in their community(ies) to identify and pursue appropriate evidence-based initiatives.

Evidence-Based Action Steps Menu[17,31,37,51,52,54,55]

- Support initiatives that incentivize individuals and businesses to trade in high-emissions equipment and machines for cleaner alternatives
- Work with employers to adopt electric vehicles for their vehicle fleets and retrofit existing vehicles with emissions-reducing technology
- Work with cities and towns to adopt pedestrian- and public transit-oriented development criteria into the approval process for community development projects
- Plant trees and support infrastructure to increase shade availability in highly-exposed neighborhoods, on school grounds, and at outdoor public venues
- Institute price incentives that enable lower-income residents to access radon mitigation services
- Create shared-use agreements that support community access to existing public, private, or nonprofit facilities before or after business hours for physical activity
- Support communities in the creation, maintenance, connectivity, and accessibility of active living infrastructure and green space in lacking areas
- Transform local vacant or abandoned spaces into vibrant and disability-accessible public spaces through land banking or other community-led means
- Advance locally-tailored approaches to community safety that keep all community members safe
- Dispatch trained social service professionals, such as Mobile Crisis Outreach Teams (MCOT), to respond to local incidents related to housing insecurity or behavioral health
- Work with local housing authorities and housing non-profits to preserve existing affordable housing units through community land trusts and other public-private strategies
- Support policies and programs to create affordable housing units accessible to very- or extremely-low income households, larger families, and people with disabilities
- Solicit public feedback on community projects in accessible local venues while providing child-care options and translation services
- Pursue community benefits agreements (CBAs) with developers to ensure that development proposals meet the needs and goals of local community members

Improve Access to High-Quality Healthcare Services for All Utahns

Introduction

Access to high-quality healthcare services is essential to reduce the cancer burden in Utah:

- The human papillomavirus (HPV) vaccine prevents more than 90% of HPV-caused cancers, including cervical, vulvar, vaginal, anal, penile, and oropharyngeal cancers.[13]
- The Hepatitis B virus (HBV) vaccine prevents liver cancer due to chronic HBV infection.[13]
- Screening for breast, cervical, colorectal, and lung cancers among eligible Utahns is associated with improved survival for these cancers.[13]
- Genetic testing can inform Utahns of their risk for certain hereditary- or genome-linked cancers such as hereditary breast and ovarian cancer (HBOC), which is associated with a malignant BRCA gene mutation, or cancers associated with Lynch syndrome.[13,19]
- Seven evidence-based tobacco cessation medications exist that help Utah tobacco users quit using tobacco products which are known to cause cancer.[13,56]
- Both physical and behavioral healthcare services are available for Utah cancer survivors and caregivers to treat underlying disease and any disease- or treatment-related symptoms that emerge during or after treatment, such as neuropathy, anxiety, or post-traumatic stress.[13]

Lifesaving healthcare services to prevent or control cancer include:

- *HPV vaccine*
- *HBV vaccine*
- *cancer screenings for breast, cervical, colorectal, and lung cancers*
- *tobacco cessation treatments*
- *genetic testing*
- *cancer treatments*
- *behavioral health care*

Better access to these and other healthcare services is associated with improvements in cancer-related outcomes.[13,57]

Many Utahns, however, face notable barriers to accessing high-quality healthcare services. These barriers include transportation, bias, and insurance status.

Sufficient access to high-quality healthcare services is associated with better cancer outcomes, but many Utahns experience obstacles that reduce their access to care

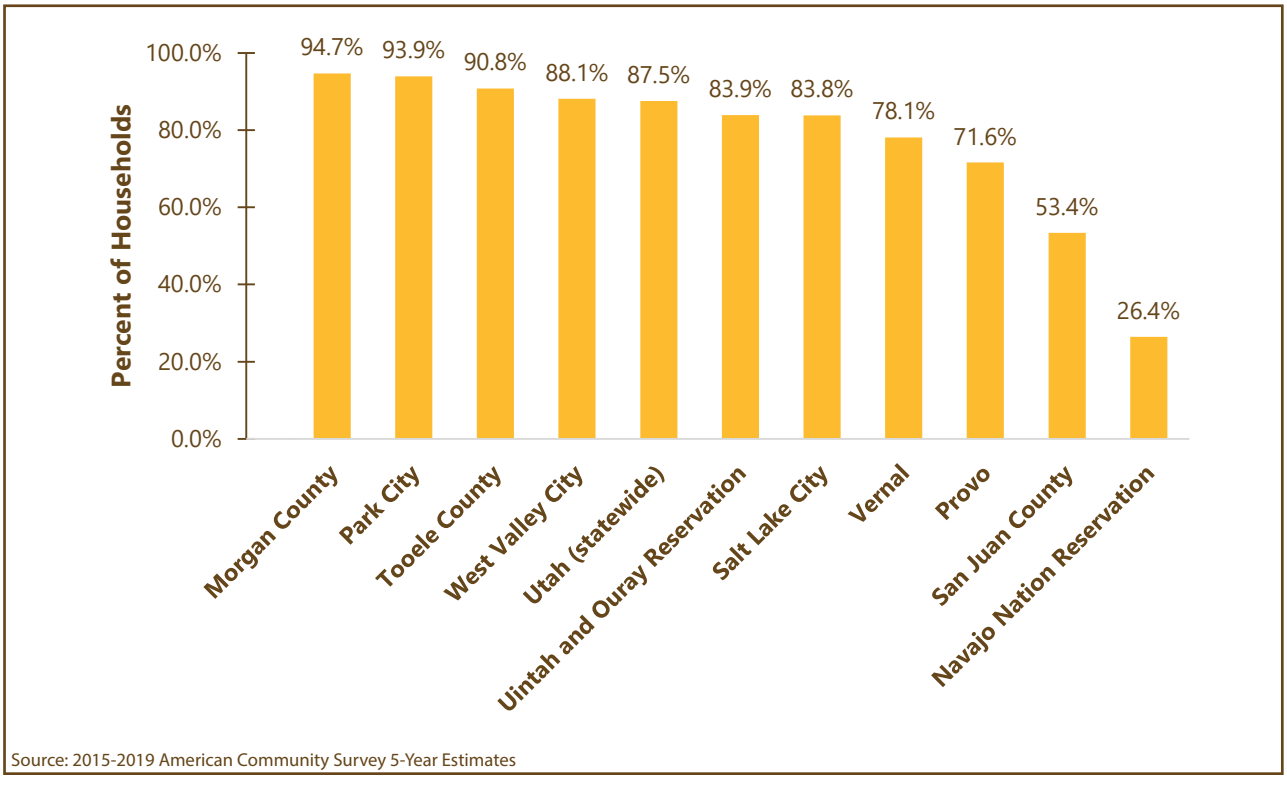
Transportation: Utahns experience varied access to healthcare services based on their access to transportation. Lower-income households, Utahns of color, Utahns with disabilities, and rural and frontier residents are less likely to have access to reliable transportation options, often due to inequities in vehicle ownership or the availability of public transportation or ride-sharing options.[58-60] In some areas of the state, especially although not exclusively in rural and frontier communities, transportation issues are compounded by a shortage of providers and longer travel times and distances to seek needed health care.[58] These inequities in access to reliable transportation are associated with missed healthcare appointments and adverse treatment decisions, thereby making it harder for these Utahns to receive evidence-based preventive, diagnostic, and specialty care.[59,60]

Utahns without reliable transportation are more likely to miss healthcare appointments or delay cancer care

Telehealth (i.e., virtual healthcare services) can connect Utahns with limited access to transportation or those living longer distances from healthcare providers to healthcare services that do not require an in-person visit, such as counseling services and some primary care.[58,59] It also provides the option for nearby community clinics to connect local residents and staff to specialty providers for consultations, follow-ups, and guidance despite the distance.[59] Between 2015–2019, 87.5% of Utah households had a broadband internet subscription, indicating a majority of Utahns could conceivably access telehealth services.[4] Still, there are large pockets of limited broadband access, such as in San Juan County where from 2015–2019 only 53.4% of residents had a broadband internet subscription (Figure 8).[4] Lack of broadband access can stem from a lack of broadband infrastructure in a community or, for Utahns in areas with such infrastructure, an inability to afford a broadband internet subscription.

Even so, telehealth is not a viable model for some healthcare services, such as vaccines or specialty care services like biopsies or radiation treatment, which must be administered in-person. Ensuring that no Utahn faces transportation barriers to these healthcare services requires solutions from both the community and the healthcare system. This entails investments and innovations in accessible transportation networks that get Utahns to healthcare facilities, as well as in healthcare approaches that deliver services directly to these communities.[58,59]

FIGURE 8 Percentage of Utah Households with a Broadband Internet Subscription Among Selected Geographic Locations, 2015–2019



Source: 2015-2019 American Community Survey 5-Year Estimates

Bias: Interpersonal and structural biases in the healthcare system influence the quality of care Utahns of different demographics receive. For example, most people—including healthcare providers—and even many electronic health record (EHR) algorithms hold implicit biases around race and ethnicity.[13,61-64] This has resulted in a pattern of people of color, especially people who are Black, receiving lower quality health care than medically similar people who are non-Hispanic White in matters such as pain management, patient-provider interaction, and cancer survivorship.[62-64] People of color are also underrepresented in research studies, clinical trials, and genetic testing databases, which further exacerbates the disconnect between the healthcare needs of these populations and the evidence-based services available to address these needs.[13] In addition, access to linguistic services is uneven across different healthcare settings, and cancer survivors of color are less likely to report receiving culturally appropriate care than survivors who are non-Hispanic White.[64]

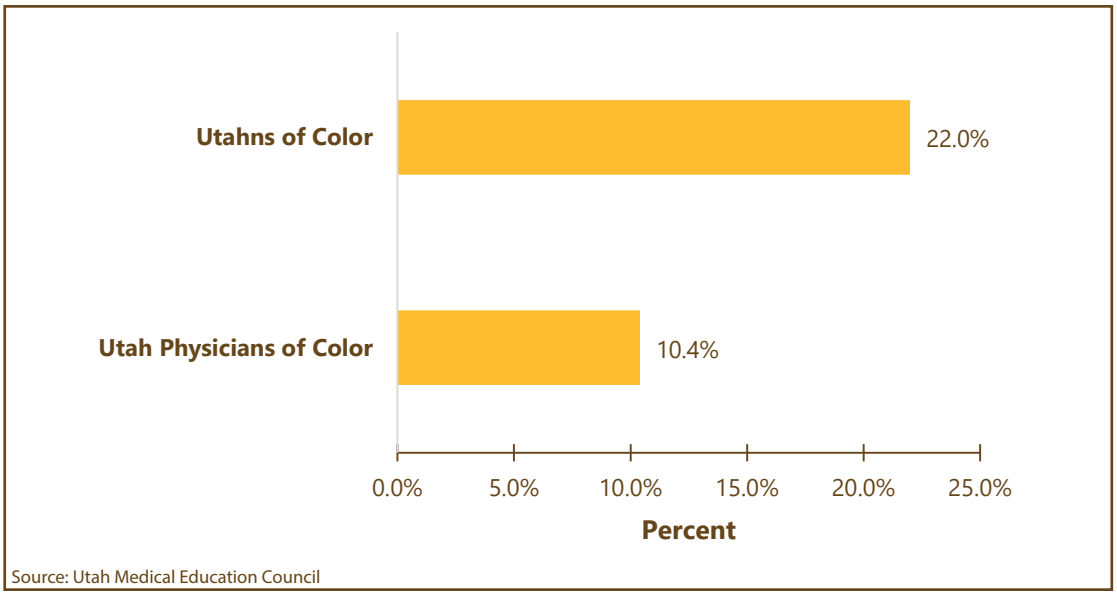
Interpersonal and structural biases in health care influence access (or lack thereof) to high-quality care

The broader U.S. healthcare system historically sanctioned harm against people of color, LGBTQIA+ individuals, people with disabilities, foreign-born individuals, and others, which has significantly eroded trust in health care.[65-67] The modern-day biases in the healthcare system and their adverse impacts on health outcomes have continued this erosion, and many people forgo needed healthcare services as a result. In 2020, for example, 28% of people who are transgender reported forgoing needed healthcare services and 40% reported avoiding cancer screenings due to disrespect or discrimination in health care.[68] Additionally, women with lower trust in the healthcare system are less likely to receive breast or cervical cancer screenings.[69,70]

Bias lowers trust in health care and dissuades people from seeking care

A diverse healthcare provider workforce can begin to restore trust, counter biases, and improve access to high-quality cancer-related care.[13,71] Limited data is available on the make-up of healthcare providers in Utah, however, the data that does exist indicates room for improvement. In 2020, for example, 22% of Utahns were people of color but only 10.4% of Utah physicians were people of color (Figure 9); this underrepresentation was especially pronounced among physicians who are Native American, Pacific Islander, Black, or Hispanic.[72]

FIGURE 9 Race/Ethnicity Demographics of Utahns and Utah Physicians, 2020



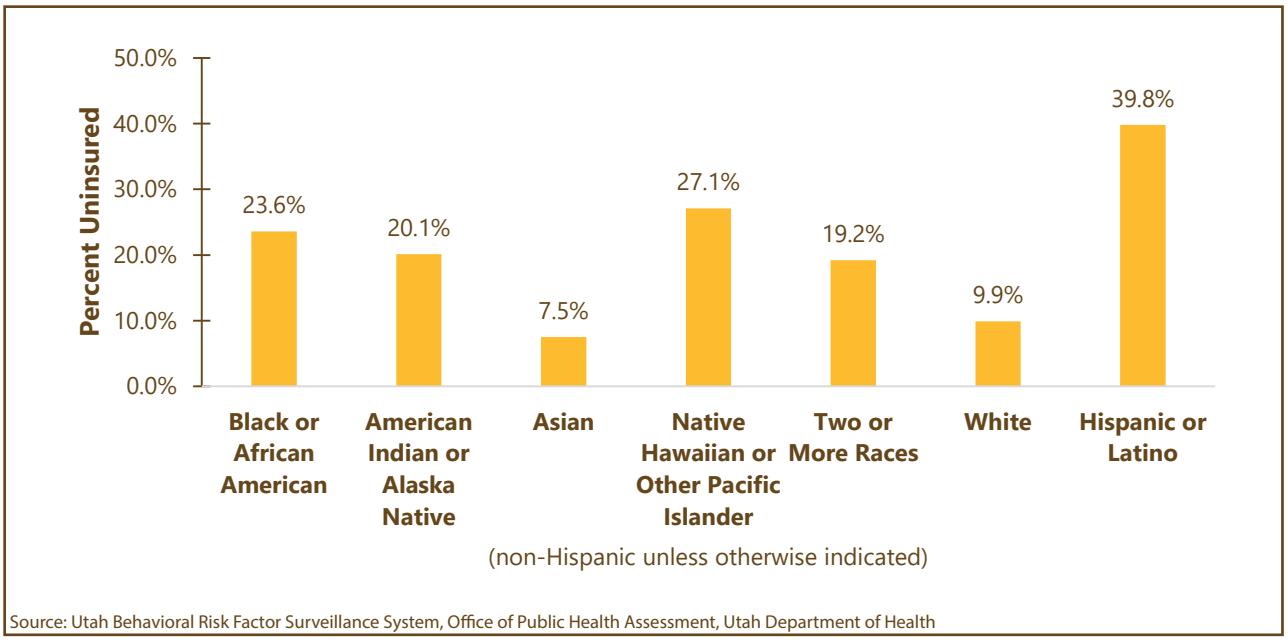
Source: Utah Medical Education Council

Even with improvements, however, a diverse workforce alone will not remove all bias in health care. Efforts to provide culturally competent and gender-affirming care, train healthcare professionals on implicit bias, adopt innovative healthcare delivery models, and critically examine existing healthcare delivery processes and algorithms are also needed.[71]

Insurance Status: Utahns face different levels of access to healthcare services due to their insurance status. Many health insurance plans fully cover a number of preventive healthcare services and provide some coverage for other services (note: underinsurance is discussed in the next Priority section).[73] In 2019, however, approximately 9.7% of Utahns—nearly 300,000 individuals—lacked health insurance.[74] The burden of not having health insurance falls unevenly among the state population. Among Utah adults younger than 65 years old, insurance status differs significantly by geographic location, from 13.8% of urban residents 18–64 years old lacking insurance compared to 16.4% of rural residents 18–64 years old and 20.5% of frontier residents 18–64 years old lacking insurance between 2017–2019.[15] Similarly, insurance status differs dramatically among Utah adults younger than 65 years old by race/ethnicity (Figure 10).[15]

Approximately 1 in 10 Utahns does not have health insurance

FIGURE 10 Percentage of Utahns Ages 18–64 Without Health Insurance by Race/Ethnicity, 2017–2019



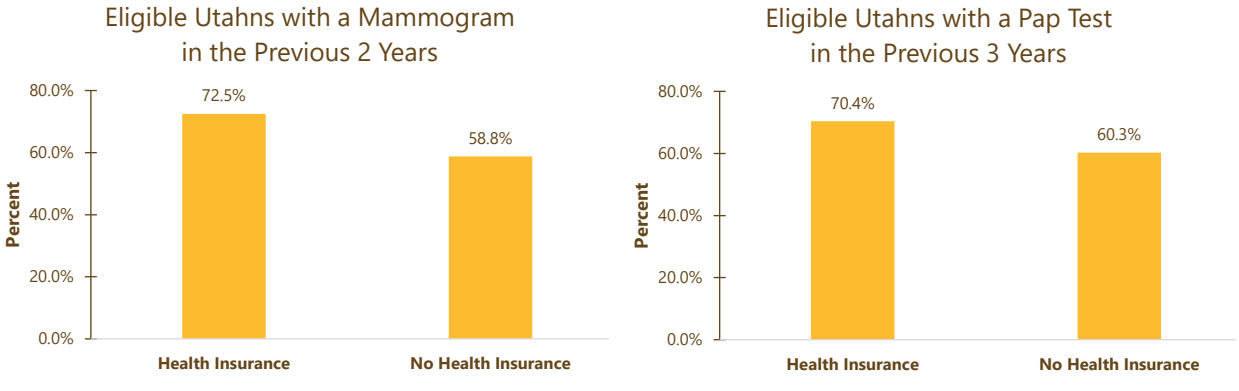
Source: Utah Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health

Not having health insurance is associated with lower access to and uptake of recommended cancer screenings, tobacco cessation services, and appropriate cancer care compared to insured Utahns.[13,15,75] In 2019, only 33.2% of eligible but uninsured Utahns had undergone recommended screening for colorectal cancer compared to more than 73.1% of eligible and insured Utahns who had undergone such screening.[15] Similarly, in 2019 eligible but uninsured Utahns were less likely to have undergone recommended screenings for breast and cervial cancer than eligible and insured Utahns (Figure 11).[15]

Not having health insurance is associated with lower access to healthcare services including:

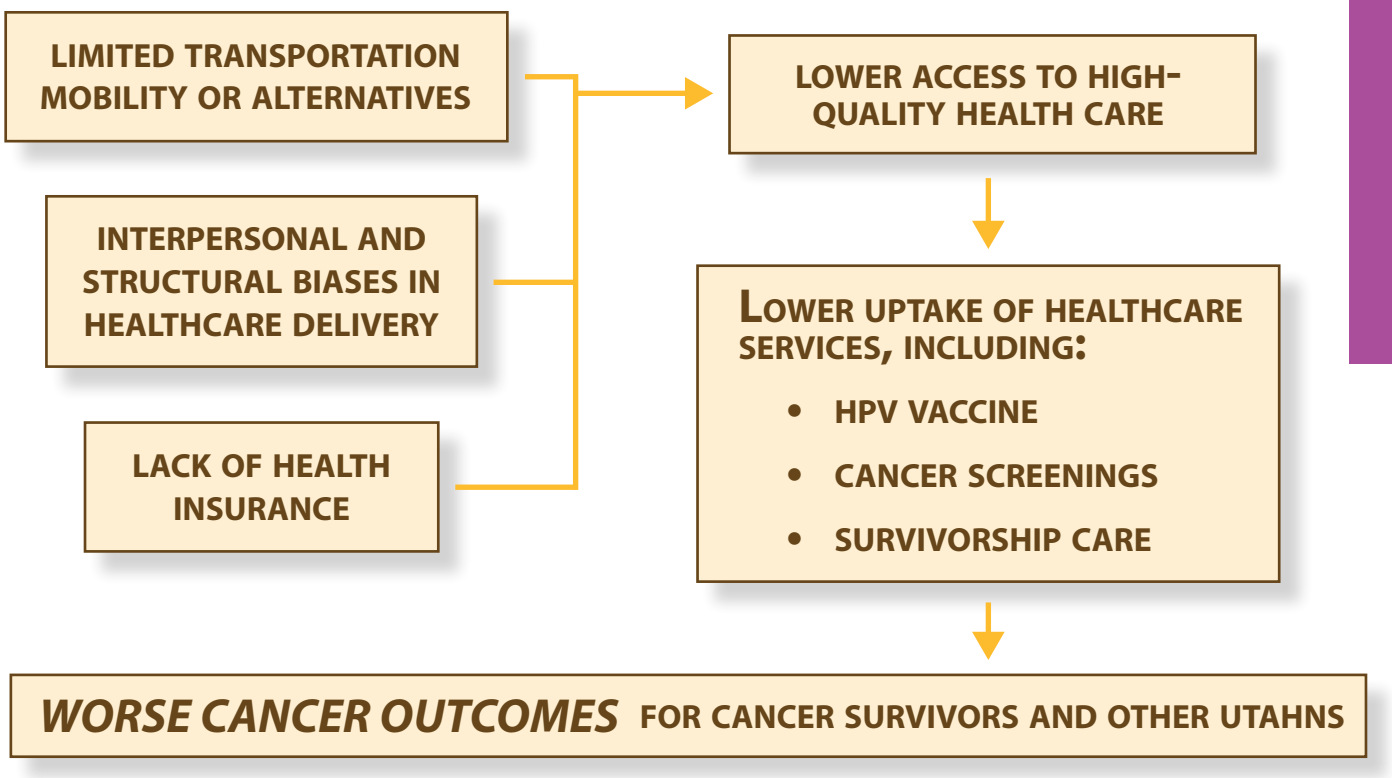
- *cancer screenings*
- *tobacco cessation services*
- *cancer treatments*

FIGURE 11 Percentage of Eligible Utahns Who Have Undergone Recommended Breast and Cervical Cancer Screenings by Health Insurance Status, 2019



Source: Utah Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health

The COVID-19 pandemic has further exacerbated these barriers to accessing high-quality healthcare services. Utahns who lack reliable broadband have faced growing obstacles to access care as more appointments shifted to telehealth visits to reduce the spread of disease.[76] The Centers for Disease Control and Prevention (CDC) cautioned providers to guard against bias when delivering COVID-19 treatment, in a context where people who are Black, Hispanic, Pacific Islander, or Native American are experiencing disproportionately higher rates of infection and death due to COVID-19.[77,78] Meanwhile, estimates indicate several million people lost their employer-sponsored health insurance after being laid off as the pandemic disrupted workplace operations.[79] COVID-19 has exposed significant and longstanding inequities in the U.S. healthcare system that Utah must address to improve access to high-quality healthcare services for all Utahns.



Strategies

Strategies describe the selected methods to equitably reach the priority. They aim to benefit all Utahns including cancer survivors, caregivers, and their families.

Strategy A	Reduce transportation-related barriers to access healthcare services for Utahns who have limited mobility
Strategy B	Increase access to telehealth in communities with limited broadband access
Strategy C	Support initiatives to bring healthcare providers and services into underserved communities
Strategy D	Improve the capacity of healthcare professionals and systems to identify and address interpersonal and structural biases in healthcare delivery
Strategy E	Remove barriers to health insurance access among uninsured Utahns

Targets for Change

Targets for change represent the measureable outcomes expected for Utah upon successful implementation of the strategies.

Reduce the proportion of Utahns who face obstacles due to lack of transportation	
TBD	TBD
Baseline (2021)	Target (2025)
Data Source: Utah Behavioral Risk Factor Surveillance System	

Reduce the proportion of Utahns who experience discrimination in health care	
TBD	TBD
Baseline (2021)	Target (2025)
Data Source: Utah Behavioral Risk Factor Surveillance System	

Reduce the proportion of Utahns who lack health insurance	
9.7%	8.2%
Baseline (2019)	Target (2025)
Data Source: American Community Survey, U.S. Census Bureau	

Reduce the proportion of Utah cancer survivors who lack health insurance	
TBD	TBD
Baseline (2020)	Target (2025)
Data Source: Utah Cancer Survivor Experiences (CASES) Survey, Utah Cancer Registry	

Overarching Vision

Equitable access to high-quality cancer prevention, early detection, and survivorship health care

Action Steps

Action steps provide examples of specific policy, systems, and environmental (PSE) change initiatives individuals and organizations can do to equitably implement the strategies. The examples listed here do not form a comprehensive list; those who implement the plan are encouraged to partner with others in their community(ies) to identify and pursue appropriate evidence-based initiatives.

Evidence-Based Action Steps Menu[13,31,59]

- Establish ride-share services to transport lower-income Utahns, elderly Utahns, and Utahns with disabilities to in-person health care
- Ensure the accessibility, affordability, and connectivity of public mass transit networks in order to connect less-mobile Utahns to health care
- Pursue public-private partnerships that increase broadband infrastructure for families and communities that lack it
- Support initiatives that improve the affordability of an internet subscription for lower-income Utahns
- Use telehealth to increase knowledge-sharing between local healthcare providers and healthcare specialists outside of the community
- Pilot innovative care delivery models, such as mobile screening vans or home-based health care, to serve harder-to-reach Utahns
- Establish and sustain community health centers, state-run community clinics, and community health worker programs in areas with fewer providers
- Support policies and programs that reduce loan payments and provide ongoing professional support for healthcare providers that practice in medically-underserved areas
- Leverage school nurses and school-based health centers to administer cancer prevention services in their local communities
- Implement shadowing and mentorship opportunities for Utah students that are underrepresented in the healthcare workforce
- Work with healthcare systems to integrate cultural competence, translation services, and literacy considerations into healthcare delivery for cancer survivors and caregivers
- Institute trainings on implicit bias and gender-affirming care for healthcare providers
- Work with researchers to adopt study protocols that encourage the participation of underrepresented groups in cancer-related clinical research
- Expand insurance outreach and enrollment services in communities with high uninsurance rates
- Support policies and programs that extend health insurance coverage options to undocumented Utahns

Reduce Financial Toxicity Among Utah Cancer Survivors

Introduction

FINANCIAL TOXICITY	=	the problems cancer survivors, caregivers, and their families experience due to healthcare costs

Source: National Cancer Institute

Cancer is an expensive disease that typically costs cancer survivors, caregivers, and their families tens of thousands of dollars to treat.[13,80] Financial toxicity describes the profound financial burden a cancer diagnosis has on many cancer survivors, caregivers, and their families.[81,82] This burden can manifest as an inability to pay for food or utilities, the need to file for bankruptcy, an inability to afford health care, or other issues associated with the cost of care.[13,82] Between 2012 and 2017, approximately 40.8% of Utah cancer survivors reported financial toxicity as a result of their cancer diagnosis.[83]

Approximately two in five Utah cancer survivors experience financial toxicity

Health insurance covers many cancer-related healthcare costs for those fortunate to have insurance, yet high deductibles, co-pays, co-insurance, and other out-of-pocket costs can still be significant. In 2019, the average deductible for employer-based healthcare coverage was $1,931 for an individual and $3,655 for a family; this same year, more than one in three adults reported they would struggle to afford even a $400 unexpected expense.[84,85] Compared to those without cancer, cancer survivors accrue higher average annual out-of-pocket costs both while undergoing treatment and even years afterward.[13,82]

Likewise, many cancer survivors contend with coverage gaps in their insurance—such as for behavioral health services, fertility preservation, and some oral chemotherapy drugs—which further add to their out-of-pocket costs:

Coverage gaps for cancer-related care often include:

- *behavioral healthcare services*
- *fertility preservation*
- *oral chemotherapy drugs*

- Some Utah employer-based health insurance plans are not required to cover behavioral healthcare services, while others link these services to deductibles and cost-sharing; incidentally, people report cost as a key obstacle to access behavioral health care.[86,87]
- Some health insurance plans (including the Utah Medicaid program prior to 2021) do not cover fertility preservation for cancer survivors whose chemotherapy or radiation treatments may jeopardize their ability to have children.[88,89] This coverage gap can be harmful to adolescent and young adult (AYA) cancer survivors who cannot afford the thousands of dollars it costs to pursue fertility preservation on their own.
- For cancer survivors 65 and older, Medicare Part D has a coinsurance rate of at least 5% and no out-of-pocket maximum for many oral chemotherapy treatments, which can easily push the drug costs that survivors must pay into the thousands of dollars each year.[90]

Health insurance coverage does not fully protect against financial toxicity

This reality serves as a potent reminder that insurance status alone is insufficient to protect against the financial difficulties that often accompany the cancer survivorship journey.

Financial toxicity is linked to detrimental changes in care-seeking behaviors. In 2019, approximately 14.3% of Utah adults reported forgoing necessary health care due to the associated cost, including more than one in 10 Utahns who have health insurance.[15] Compared to survivors who do not experience financial toxicity, cancer survivors who experience financial toxicity are more likely to postpone seeking health care and often have lower adherence to cancer treatment regimens, which jeopardize treatment efficacy and survivor prognosis.[13,91,92] Financial toxicity is also associated with emotional distress and poorer quality of life.[82]

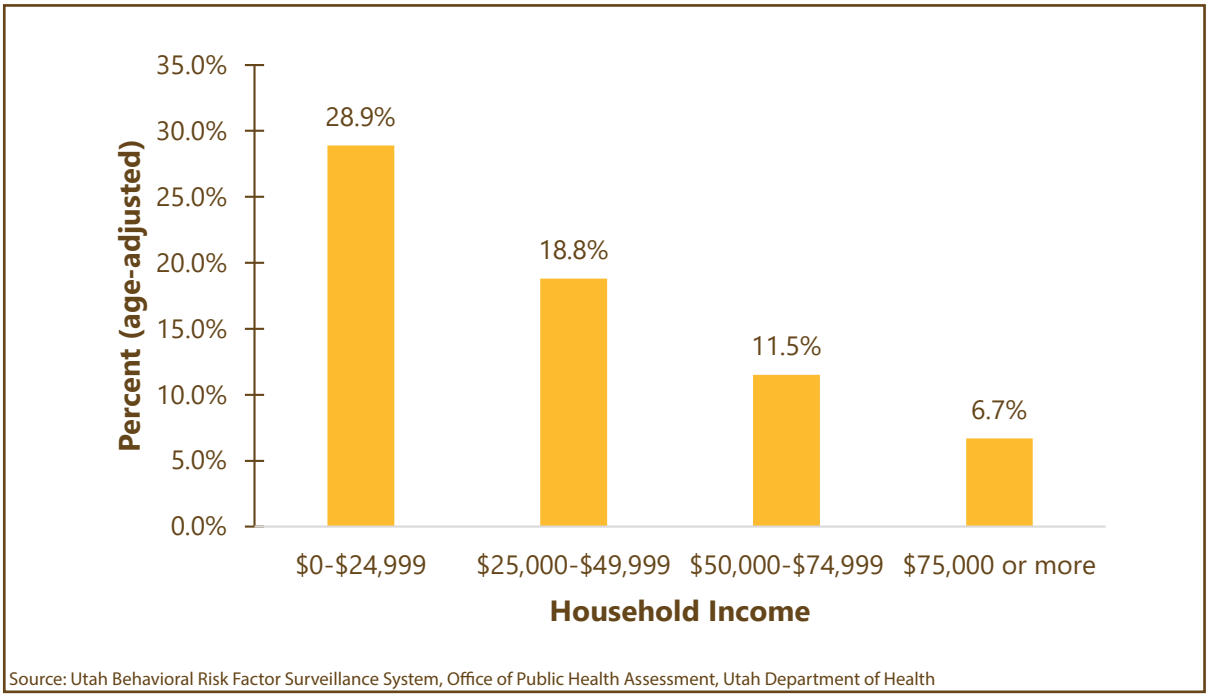
Cancer survivors with financial toxicity are less likely to seek health care and less able to adhere to their cancer treatment

The risk of financial toxicity among cancer survivors, caregivers, and their families is associated with household income, assets, and debt.[82]

Income: Utahns who earn less are at greater risk of financial toxicity from a cancer diagnosis than Utahns who make more money.[82] Lower earnings make it inherently more difficult to afford cancer-related healthcare expenses; between 2017–2019, a significantly higher proportion of low-wage earners in Utah skipped needed healthcare services due to cost than their counterparts who earn higher wages (Figure 12).[15] Additionally, cancer survivors in active treatment miss approximately 3-5 more weeks of work per year than those who are not receiving cancer treatment, but many low-wage jobs do not offer paid or unpaid time off to their employees.[13,82,93] This can lead to lost wages or job loss—which many cancer survivors and caregivers experience as they seek treatment—that then makes it harder to financially manage a cancer diagnosis.[82]

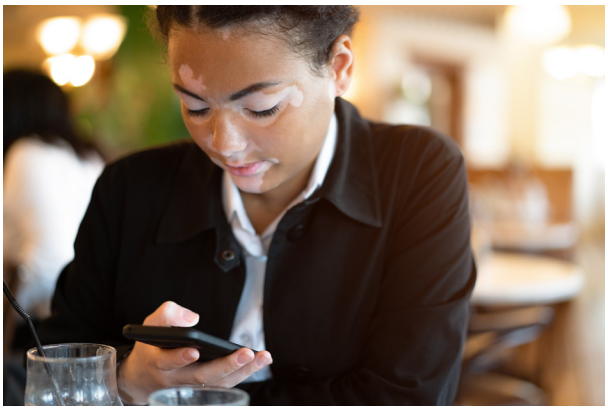
Lower household income is associated with a higher risk of financial toxicity

FIGURE 12 Percentage of Utah Adults Who Did Not See A Doctor Due to Cost, 2017–2019



Source: Utah Behavioral Risk Factor Surveillance System, Office of Public Health Assessment, Utah Department of Health

Lower wages are disproportionately prevalent among some Utah demographics. Utahns of color and Utahns with disabilities have lower average earnings than Utahns who are non-Hispanic White and Utahns without disabilities, respectively.[15,94] Meanwhile Utah women, especially women of color, contend with one of the worst gender pay gaps in the nation compared to Utah men.[95] These income-based inequities increase the risk of financial toxicity after a cancer diagnosis for many cancer survivors, caregivers, and their families throughout the entire state.



The drivers behind these inequities are multifold:

- Discriminatory policies—intentional or otherwise—in some workplaces limit access to job opportunities and higher earnings for women, Utahns of color, and Utahns with disabilities.[96]
- Exposure to the criminal justice system—which disproportionately targets people of color, LGBTQIA+ individuals, and people with disabilities—and a subsequent criminal record are associated with reduced future earnings regardless of the severity of the offense.[97-100]
- School disciplinary policies such as suspensions and expulsions are overwhelmingly meted out to students of color and students with disabilities; this diminishes future job prospects by disrupting access to formal education.[101]
- The COVID-19 pandemic has pushed a disproportionate share of women out of the workforce compared to men, while a disproportionate share of people of color have also lost their jobs during the pandemic compared with people who are non-Hispanic White.[102]

Inequities in household income arise from:

- *discriminatory workplace policies*
- *exposure to the criminal justice system*
- *lower access to formal education*
- *the COVID-19 pandemic*

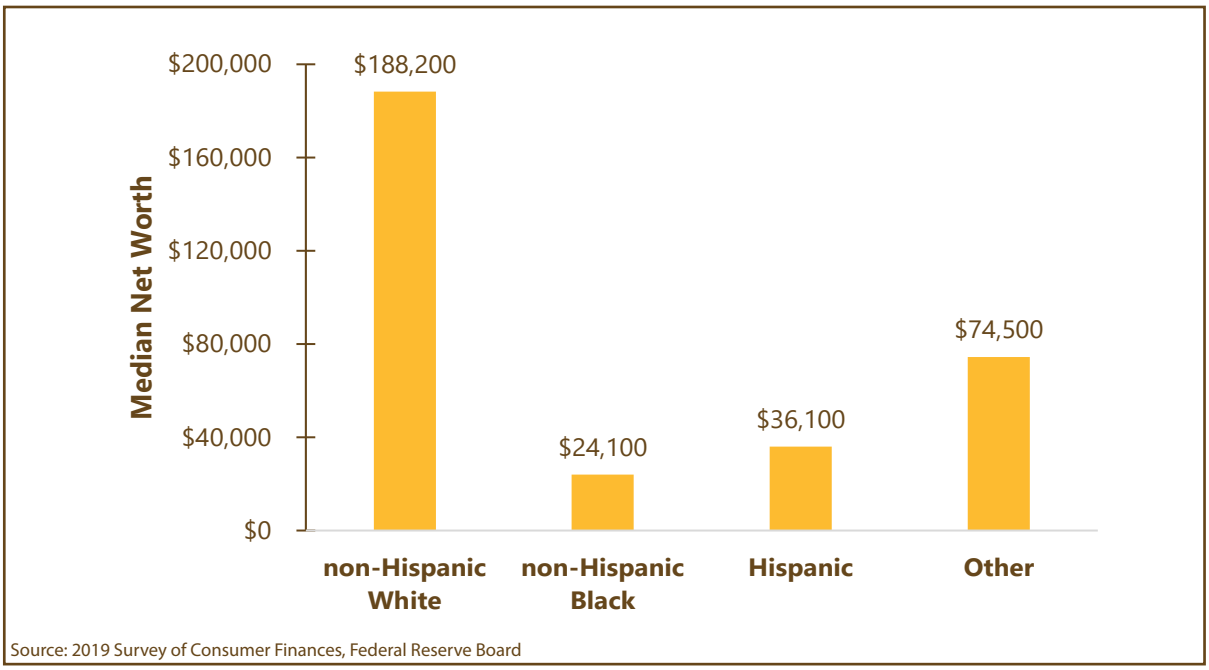
Utah must consider these and other underlying drivers of income-based inequities to reduce the risk that Utah cancer survivors, caregivers, and their families will experience financial toxicity.

Assets and Debt: Utah households with fewer financial assets or a higher debt load face an increased risk of financial toxicity from a cancer diagnosis than households with more financial assets and lower debt.[82] Cancer survivors and caregivers with fewer assets or more debt are less likely to have sufficient savings to dip into to pay for treatment and post-treatment care, while a significant portion of their income would already be dedicated to outstanding debt payments. A cancer diagnosis can then exacerbate these financial circumstances and make it even more difficult to afford needed care. Indeed, many cancer survivors ultimately incur rising levels of debt due to their diagnosis.[82] Cancer survivors are nearly three times more likely to file for bankruptcy than their counterparts without a cancer diagnosis; this risk of bankruptcy appears to increase the younger a survivor is when diagnosed.[82,103]

Fewer household assets and larger household debt are associated with a higher risk of financial toxicity

Fewer assets and higher debt are more prevalent among some Utah demographics. Families of color have significantly fewer household financial assets on average compared with families who are non-Hispanic White (Figure 13).[104] Likewise, rural and frontier communities face higher poverty rates and lower net worth compared to their urban counterparts.[105,106] These inequities in assets and debt increase the risk of financial toxicity after a cancer diagnosis for many cancer survivors, caregivers, and their families throughout the entire state.

FIGURE 13 Median Net Worth of U.S. Households by Race/Ethnicity, 2019



Source: 2019 Survey of Consumer Finances, Federal Reserve Board

As with household income, the drivers behind these inequities are multifold:

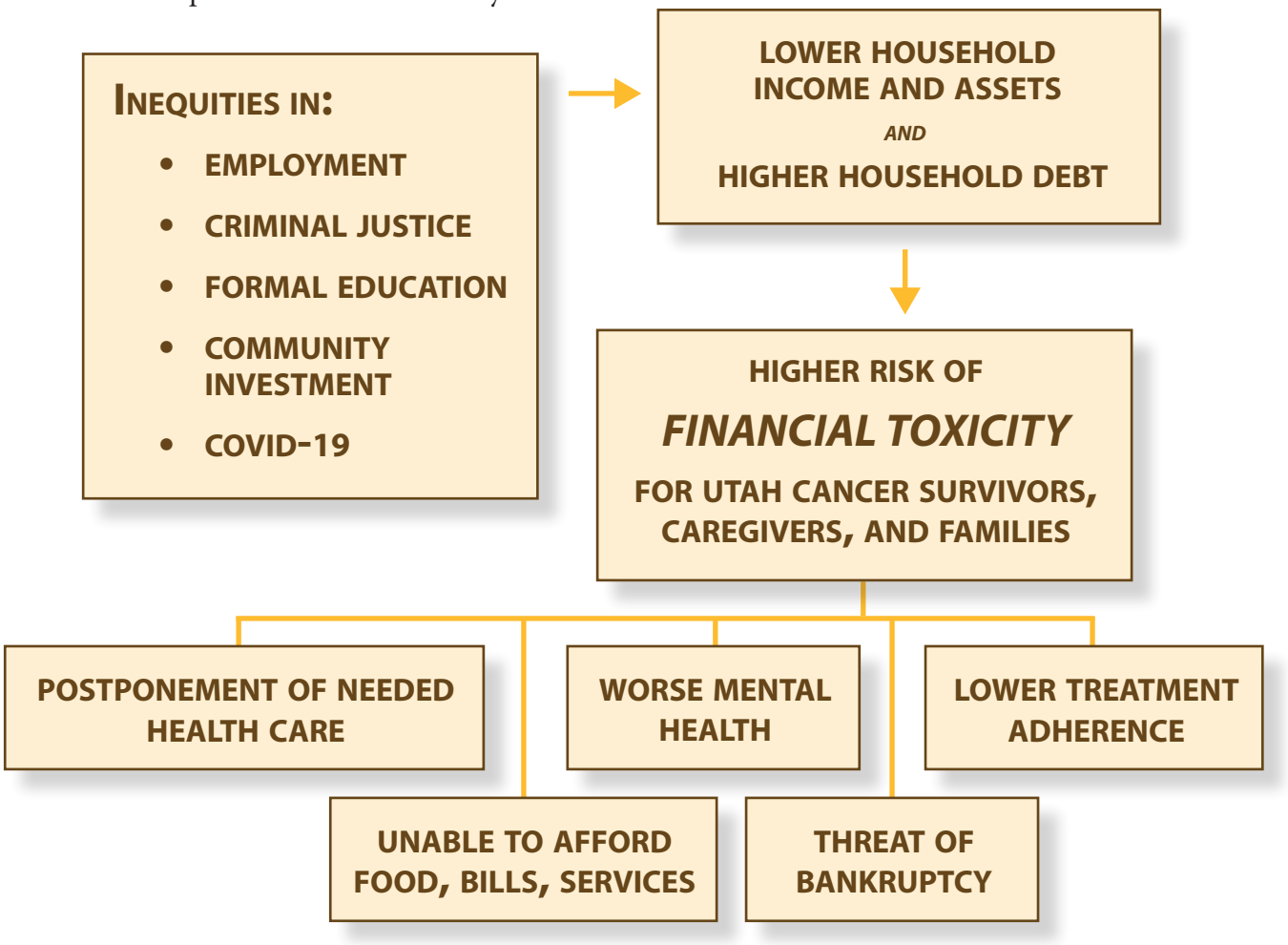
- Decades of disinvestment in rural communities and generations of racist policies and systems targeting communities of color have minimized or outright denied access to socioeconomic opportunities and upward mobility.[107-109]
- Civil fines, citations, and legal- or court-related fees are disproportionately meted out to people of color and those of lower socioeconomic status and can exact a serious financial toll.[110]

- Student loan debt, which almost quadrupled as a share of the total per capita household debt burden in Utah between 2003-2018, falls disproportionately on borrowers of color.[111,112]
- The COVID-19 pandemic has pushed many Utah families into a precarious financial position by forcing households to deplete savings or incur additional debt.[113]

Inequities in household assets and debt arise from:

- *community-level disinvestment*
- *exposure to the criminal justice system*
- *student loans*
- *the COVID-19 pandemic*

Utah must consider these and other underlying drivers of asset- and debt-related inequities to reduce the risk that Utah cancer survivors, caregivers, and their families will experience financial toxicity.



Amid the real threat of financial toxicity from a cancer diagnosis, most cancer survivors are interested in discussing costs with their healthcare team.[82] Many providers, however, are ill-equipped to have cost-related discussions with their patients, and few patients subsequently report actually engaging in these discussions.[82] These discussions are important, as there may be cheaper yet similarly effective treatment regimens available that cancer survivors can better afford and which would promote better adherence.[82] Omitting these discussions in the healthcare setting misses a critical opportunity to connect survivors to the patchwork of existing short-term financial resources that can defray a portion of the costs of cancer care.[114,115]

Strategies

Strategies describe the selected methods to equitably reach the priority. They aim to benefit all Utahns including cancer survivors, caregivers, and their families.

Strategy A	Expand health insurance coverage for cancer-related physical and behavioral healthcare services for Utah cancer survivors and caregivers
Strategy B	Provide employment-related benefits and protections to Utah workers who are or have been diagnosed with cancer or must care for a family member diagnosed with cancer
Strategy C	Pursue initiatives that increase household financial assets and reduce household debt among underserved Utah communities
Strategy D	Improve the capacity of healthcare professionals and systems to address the financial toxicity concerns of cancer survivors and caregivers

Targets for Change

Targets for change represent the measureable outcomes expected for Utah upon successful implementation of the strategies.

Decrease the proportion of Utahns who forgo health care due to cost

14.3%	11.4%
Baseline (2019)	Target (2025)

Data Source: Utah Behavioral Risk Factor Surveillance System

Decrease the proportion of Utah cancer survivors who experience financial toxicity

40.8%	36.7%
Baseline (2012-2017)	Target (2025)

Data Source: Utah Cancer Survivor Experiences (CASES) Survey, Utah Cancer Registry

Overarching Vision

Equitable access to affordable health care and improved quality of life for cancer survivors, caregivers, and their families

Action Steps

Action steps provide examples of specific policy, systems, and environmental (PSE) change initiatives individuals and organizations can do to equitably implement the strategies. The examples listed here do not form a comprehensive list; those who implement the plan are encouraged to partner with others in their community(ies) to identify and pursue appropriate evidence-based initiatives.

Evidence-Based Action Steps Menu[31,82,95,97,115-117]

- Expand coverage among public and private insurance plans for cancer survivorship services (e.g., fertility preservation, counseling)
- Improve insurance coverage of genetic counseling, testing, and risk management services for individuals at risk of developing cancers due to HBOC, Lynch syndrome, and other tumor predisposition conditions
- Expand prescription drug assistance programs and increase utilization of existing prescription drug supports for cancer survivors and caregivers
- Support initiatives that incentivize Utah workplaces to adopt paid sick and family leave policies
- Increase access to employment rehabilitation programs for cancer survivors and related trainings for employers
- Host job fairs and job (re)training opportunities in communities with high unemployment
- Establish vocational education tracks in rural, frontier, and Title I high schools that expose students to trades and apprenticeships
- Work with employers to examine salary discrepancies by sex in their workforce and readjust accordingly
- Encourage employers to not ask about criminal history prior to a job interview or job offer
- Work with communities to apply trauma-informed approaches to criminal justice and school discipline matters that foster accountability, rehabilitation, and healing
- Expand the availability of college access programs and need-based scholarships to Utah public colleges, universities, and technical colleges
- Expand utilization of tax credits and child care subsidies for low-income households and households with children
- Improve access to fair loans, capital, financial literacy, and investment in disinvested communities through microlending networks and Community Development Financial Institutions (CDFIs)
- Work with healthcare systems to embed financial toxicity screening into electronic health records (EHRs) and train providers on how to have cost-related dialogues
- Co-locate free financial support and insurance navigation services at healthcare facilities for cancer survivors and caregivers

The Next Steps

The key to eliminate cancer inequities and reduce the burden of cancer among all Utahns lies with the social, economic, and political factors that determine health. Countless community-based organizations, including many that operate outside the realm of cancer or even public health, are already engaged in addressing these factors to create a better, more equitable Utah. The Utah Comprehensive Cancer Control Program (CCC) is eager to join in these efforts.

CCC commits to engage with both existing and new internal, external, and coalition partners around cancer, health equity, and the social, economic, and political factors that determine health. Internally, CCC anticipates the opportunity to braid funding and share best practices with other chronic disease and health promotion programs working in these areas. Externally, CCC anticipates the opportunity to listen and learn from community members and organizations that have been doing this work for years, decades, or even generations. CCC will work with the Utah Cancer Action Network (UCAN) coalition to apply these insights into its cancer-related work.

Additionally, CCC will release an annual Request for Proposals (RFP) grant application to lend financial support to community-based projects that align with the priorities and strategies in this plan. These grants are available to cancer organizations and non-cancer organizations alike. CCC looks forward to working together to eliminate cancer inequities, reduce the burden of cancer, and achieve a society where all Utah families, friends, and neighbors can together lead long and healthy lives.

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Glossary

Age-Adjusted: A statistical technique used to make fairer comparisons between different health statistics by ensuring that differences from one year to another, or between one population group and another, are not due to differences in the age distribution of the populations being compared.

Behavioral Health: The state of overall mental well-being as it relates to emotion, cognition, and behavior.

Broadband: Technology that allows for massive amounts of communications and data to be sent and received at once.

Cancer: A disease in which abnormal cells divide uncontrollably and can invade nearby tissues and also spread to other parts of the body through the blood and lymph systems.

Caregiver: A person who looks after and attends to the needs of somebody who is ill and either temporarily or permanently unable to do so themselves.

Chemotherapy: A catch-all term for the various drugs available to treat cancer.

Clinical Trial: A research study in which one or more human participants are prospectively assigned to one or more interventions (which may include placebo or other controls) to evaluate the effects of those interventions on health-related biomedical or behavioral outcomes.

Colonoscopy: A procedure in which a trained specialist uses a long, flexible tube with a light and tiny camera on one end, called a colonoscope or scope, to look inside the rectum and colon. A colonoscopy can show irritated and swollen tissue, ulcers, polyps, and cancer.

Cost-Sharing: The portion of healthcare costs health insurance does not cover and that the patient must pay out-of-pocket, usually in the form of deductibles, co-pays, or co-insurance. Cost-sharing obligations differ based on the particular health insurance plan in which someone is enrolled.

Co-Pay: A type of cost-sharing in which the patient must pay a certain specified amount for a healthcare service while insurance pays the remaining amount.

Co-Insurance: A type of cost-sharing in which the patient must pay a certain specified percentage of the cost of a healthcare service while insurance pays the remaining percentage.

Deductible: The amount of money a patient must pay for healthcare services on their own before health insurance will step in and cover the total amount minus cost-sharing.

Discrimination: The unfair treatment of someone based on a characteristic such as race, sex, age, national origin, or other demographic characteristics.

Disinvestment: The practice of withholding, removing, or otherwise not providing sufficient funding and resources to a community, which typically results in fewer available opportunities and worse social, economic, and political outcomes.

Displacement: The loss of access to a home or community and the subsequent need to relocate, usually against a person's wishes, often due to rising costs or changes to the built environment.

Early Detection: The discovery, often through cancer screening, of cancer at an earlier stage when it is easier and more effective to treat.

Electronic Health Record (EHR): A digital file of a patient's health information.

Emergency Food System: A network of entities, such as food pantries and aid organizations, that are able to quickly provide food to households who would otherwise go hungry.

Fertility Preservation: A medical procedure done prior to any treatment that allows a patient to retain the option of having biological children should the treatment otherwise reduce or eliminate their ability to do so.

Financial Toxicity: The problems that patients, caregivers, and their families experience due to healthcare costs, such as being unable to afford treatment, going into debt, or experiencing increased anxiety about the cost of care.

Food Security: The perceived or actual ability to physically access and financially afford enough healthy, nutritious, and culturally appropriate food.

Genetic Testing: The examination of a person's genetic material in order to identify any increased genetic risk of developing diseases such as cancer in the future.

Genetic Tumor Predisposition: An increased risk of developing tumors, either benign or malignant, due to the particular make-up of a person's genetic code.

Genomics: The study of the genetic material, including genes and their functions, of an organism.

Health Disparities: Differences in health behaviors or health outcomes between different population demographics.

Health Equity: Fair and just access to opportunities for people to achieve their best possible health.

Health Inequities: Disparities in health behaviors or health outcomes among underrepresented and underserved communities that are otherwise avoidable but for systemic barriers that limit access to opportunities for health.

HBV: Hepatitis B virus (HBV) is a virus that can lead to liver inflammation and cause liver cancer. A vaccine is available to prevent infection.

HPV: Human papillomavirus (HPV) is a virus that can cause cervical, anal, vulvar, vaginal, penile, and oropharyngeal cancers. A vaccine is available to prevent infection from the strains of HPV virus that cause cancer.

Implicit Bias: The subconscious attitudes of someone toward another person based on their demographic characteristics that unintentionally yield prejudicial thoughts, words, or behaviors.

Glossary

Incidence: The number of new cases of a disease diagnosed each year.

Interpersonal Bias: Prejudicial thoughts, words, or behaviors by someone toward another person based on their demographic characteristics.

Invasive: A term used to describe cancer that has spread beyond the original place or tissue in which it first developed.

In Situ: A term used to descibe cancer that has not yet spread beyond the original place or tissue in which it first developed.

LGBTQIA+: An umbrella acronym used to encompass lesbian, gay, bisexual, transgender, queer, intersex, and asexual individuals as well as others who do not identify as heterosexual or cisgender. Similar acronyms that are common include LGBT and LGBTQ.

Mammogram: An x-ray of the breast taken with a device that compresses and flattens the breast.

Marginalization: The exclusion of a person, group, or community from participation in matters that pertain to them, often in conjunction with neglect and discrimination.

Medicaid: A public health insurance program run in partnership between the federal government and the states that serves lower-income Americans.

Medicare Part D: A component of Medicare, a public health insurance program run by the federal government, that covers some prescription drug costs for older Americans and Americans with certain disabilities.

Mortality: A term used for death rate, or the number of deaths in a certain group of people in a certain period of time.

Out-of-Pocket Costs: Healthcare costs that health insurance does not cover and that the patient must pay.

Pap Test: A procedure in which a small brush or spatula is used to gently remove cells from the cervix so they can be checked under a microscope for cervical cancer or cell changes that may lead to cervical cancer.

Prognosis: The anticipated trajectory of a patient upon developing a disease.

Quality of Life: The overall enjoyment of life, including well-being and the ability to carry out various activities.

Radiation Treatment: A type of cancer treatment that uses specific high-energy sources to destroy cancer cells.

Radon: An odorless, invisible gas that occurs naturally in the ground and can seep into a home or building and cause lung cancer.

Screening: Checking for disease when there are no symptoms. Since screening may find disease at an early stage, there may be a better chance of treating the disease. Examples of cancer screening tests are the mammogram (breast), colonoscopy (colon), Pap test and HPV test (cervix), and lung CT (lung).

Social Determinants of Health: Social, economic, and political factors that drive health outcomes and may lead to health inequities.

Structural Bias: Prejudice toward another person based on their demographic characteristics that arises from the make-up of policies, systems, or institutions.

Survivor: One who remains alive and continues to function during and after overcoming a serious hardship or life-threatening disease. In cancer, a person is considered to be a survivor from the time of diagnosis until the end of life.

Survivorship: In cancer, survivorship focuses on the health and life of a person with cancer from the time of diagnosis until the end of life. It covers the physical, psychosocial, and economic issues of cancer both during and beyond the diagnosis and treatment phases. Survivorship includes issues related to the ability to get healthcare and follow-up treatment, late effects of treatment, second cancers, and quality of life. Family members, friends, and caregivers are also considered part of the survivorship experience.

Telehealth: Healthcare services delivered virtually. Also called telemedicine.

Treatment Non-Adherence: The lack of compliance by a patient to their prescribed treatment regimen, often due to lack of understanding or cost concerns. Treatment non-adherence may reduce the efficacy of the prescribed treatment.

Underrepresented: A group or community that holds disproportionately fewer decision-making roles in positions and places of power compared to their share of the broader population, usually due to marginalization and discrimination.

Underserved: A group or community that lacks access to resources and opportunities commensurate with their community-level assets and needs, usually due to marginalization and discrimination.

UV Radiation: Ultraviolet (UV) radiation is energy from the sun that can cause sunburns and lead to skin cancer.

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