American Cancer Society Health Equity Community Projects:

Social Determinants of Health through the Cancer Lens and Strategies to Address Them

Introduction

For the American Cancer Society (ACS) and our nonprofit, nonpolitical advocacy affiliate, the American Cancer Society Cancer Action Network℠ (ACS CAN), health equity means everyone has a fair and just opportunity to prevent, find, treat, and survive cancer. Addressing the social determinants of health is one way to advance health equity in communities. Those determinants are defined by the World Health Organization as "the conditions in which people are born, grow, live, work, and age," which are "shaped by the distribution of money, power, and resources, at the global, national, and local levels." [1]

This document provides background information on the three social determinants of health topics that are the focus of the ACS Health Equity Community Projects:

1. **Financial stability to support cancer survivors**

2. **Food security and access to healthy foods to support cancer prevention, treatment, and survivorship**

3. **Transportation and mobility to support cancer prevention, early detection, treatment, and survivorship services**

These social determinants of health topics were chosen after careful consideration by cross-vertical ACS staff and volunteer leadership based on the following criteria:

- **Strategic alignment and momentum:** The alignment of the topics with other existing or emerging organizational strategic priorities and plans, and the degree to which the topics already have influential champions

- **Evidence of impact on cancer disparities:** The availability of evidence and data tying the topic to cancer disparities and inequities

- **Evidence-based interventions:** The availability of evidence-based interventions to address the topics and eliminate cancer disparities and inequities

- **Feasibility of funding and availability of other resources:** The availability of ACS resources to address the topics, as well as opportunities for future fundraising on the topics

- **Potential for sustained change:** The opportunity to affect structural and systemic change in communities

The following sections highlight the three social determinants of health and their connection to cancer prevention, detection, treatment, survivorship, disparities, and inequities, as well as suggested evidence-based strategies to address each topic.

> **Important reminder:** Strategies listed are not exhaustive and should not be the only ones considered for implementation. Members of your community, especially those experiencing a disproportionate cancer burden, should advise and formulate the solutions and make the final decision on which strategies should be implemented. Strategies should not only be informed by evidence, but also by the community, and help reduce the cancer burden among those with the greatest need.

Financial Stability
to Support Cancer Survivors

Through the Cancer Lens

Patient experience case study: Monique, who is 41 years old, has a family history of breast cancer and knows she should have a mammogram, but she can't afford to take time off work. She needs every hour of the day to work so she can make a wage that's enough to support her family. Monique also knows if she is diagnosed with breast cancer she will be unable to afford the out-of-pocket costs associated with the needed doctor's visits and treatment. A few years later, she feels a lump in her breast that becomes bothersome. She makes a doctor's appointment and gets the needed mammogram. Monique is diagnosed with breast cancer. Not only does she now have to deal with the devastating news of having cancer, but she is also overcome with stress about treatment costs and follow-up visits. How can she afford to take off work, go to appointments, and receive treatment? How is her medical debt going to affect her family? Will she be able to comply with prescribed treatment and eat healthy, as recommended throughout treatment?

Financial hardship (also called financial toxicity and economic burden) describes the distress that patients and families like Monique's experience due to high out-of-pocket costs of health care and treatment, loss of productivity, income, and assets, which increases the risk for early mortality. Cancer survivors ages 18-64 have financial hardships.[2] In fact, cancer patients are 2½ times more likely to file for bankruptcy than

the rest of the population.[3] A 2015 survey from Kaiser Family Foundation found that 42% of respondents said health services are more difficult to afford than monthly utilities, housing, food expenses, and transportation costs.[4] People with advanced-stage cancer, recurrent cancer, and other chronic illnesses are at higher risk for financial toxicity, along with those who have low household income and/or educational attainment, are of minority race/ethnicity, and have a rural residence. Being unmarried and female in some populations, as well as young cancer survivors, are also risk factors for financial hardship.[5, 6] For example, 48% of surveyed black adults by the Black Census Project reported "living in a household that lacked enough funds to pay a monthly bill in the last 12 months, and 31% personally cut back on food to save money."[7] In addition, 49% of rural residents reported being unable to afford an unexpected $1,000 expense of any type.[8]

Low-income patients are more likely to encounter unsupportive work environments that do not provide benefits such as paid sick or family medical leave and lose their source of income.[9] Pressed with paying for cancer treatment and other basic necessities, patients may choose one over the other, often using coping strategies such as selling or pawning personal property; forgoing basic needs such as medical care (including adhering to their cancer treatment regimens), housing, utilities,

transportation, and education; and purchasing inexpensive, unhealthy foods.[10] Poverty, regardless of a cancer diagnosis or not, leads to poorer cancer outcomes, because it contributes to challenges of adhering to treatment along with poor nutrition, higher rates of smoking, obesity, and toxic stress – all known risk factors for cancer.

Evidence-based Strategies and Practices

What community-level, lasting solutions could we implement to promote financial stability? Following are some population-level strategies.

Strategy	Strategy description	Resource/Reference
Employee paid sick and medical leave policies	Leave policies could be championed by employers offering paid sick and medical leave. Sick leave is commonly used for short-term acute illnesses or in short increments to accommodate health care appointments such as cancer screening. Medical leave is commonly used for longer-term health issues during which an employee cannot work such as major surgery or some cancer treatments.	The lack of paid sick and medical leave decreases the likelihood that a worker will take the time they need to seek medical services, including cancer screenings and treatment, both for themselves and family members.[11] Not only does research suggest employers can provide paid leave with no negative effect on profitability, but they can also realize a healthier and more productive workforce and spend less on direct medical costs, worker compensation, disability costs, etc.[12] Paid medical leave can help employees avoid financial hardship and may be the difference between keeping and losing employees.[13, 14] It can also help reduce employee turnover and boost morale by providing support during a stressful time.

Employers could define a policy for paid short-term absences due to minor illnesses such as colds or flus, or in short-term increments to accommodate health care appointments such as cancer screening. They could also define an employee paid medical leave policy, commonly used for longer-term health issues during which an employee cannot work such as a major surgery or some cancer treatments.

In addition to offering paid sick and medical leave, employers can make sure policies are written and easily accessible, can offer sick leave pool and carryover policies, and can ensure that managers support and model sick and medical leave use. Cancer patients cite work flexibility, disclosure to colleagues, and paid time off as crucial to continuing to work during treatment. Coworker support and job flexibility also improve return-to-work experiences.[15] |

Strategy	Strategy description	Resource/Reference
Medicaid expansion	In 2010, the Affordable Care Act (ACA) offered expanded Medicaid coverage to nearly all non-elderly individuals with incomes at or below 138% of the federal poverty level. In 2012, the US Supreme Court made Medicaid expansion optional for all states. Many states have accepted Medicaid expansion, including Arizona, Michigan, Montana, and Ohio. Others have not, and some are currently working to become expansion states. Read more about **Medicaid coverage in your state.**	All states can elect to expand Medicaid coverage to at least 138% of the federal poverty level. States can limit Medicaid waivers, such as limiting or restricting eligibility (work requirements, drug testing, and waiving retroactive eligibility), imposing cost sharing (copayments and premiums), eliminating benefits or services (non-emergency medical transportation), and placing limits on the length of program eligibility.[16] Medicaid benefits and services necessary for cancer patients include tobacco control, diet, and physical activity for prevention; colorectal, breast, and cervical cancer screenings for early detection; biopsies and pathology reporting for diagnosis; chemotherapy, pain management, and psychosocial care during treatment; surveillance and management of long-term effects during survivorship; and hospice care and palliation for end-of-life care.[17] *Any work on this policy issue or other access to care advocacy efforts need to be discussed and coordinated with ACS CAN staff.*
State Earned Income Tax Credit (EITC) Partnership with Volunteer Income Tax Assistance (VITA) sites to maximize EITC	EITC is the largest tax credit to low-income workers that can reduce the tax burden on the working poor, put more money in their pockets, and make saving possible. Twenty-five states and the District of Columbia have implemented EITC to varying degrees.[18] VITA is a community-based program that provides free, reliable, and effective tax preparation services for low- and middle-income households so they may leverage the EITC. Individuals eligible for VITA services include those who: earn $54,000 or less, have a disability, or have limited English proficiency. Some VITA providers have a small number of paid staff who coordinate their programs, but highly trained volunteers perform the bulk of the work, including greeting tax filers, conducting intake interviews, and working with clients to accurately complete and file tax forms.[21]	EITC has been linked to factors that improve health and well-being, such as employment, health insurance, child development, and food security. It has also been linked to improved behaviors, such as reduced maternal smoking and reduced stress.[19] States can create EITC that is at least 15% of the federal credit and fully refundable. "Each state can determine the amount of the credit, its coverage, and family size adjustments, as well as whether and to what extent it will be refundable. States can also encourage families to save all or part of their refund by offering a 'split refund' option on state income tax returns whereby filers can divide their refunds into more than one account." [20] Health systems and social services can refer clients to VITA programs, so they may maximize EITC. *ACS CAN does not have organizational positions on these policies; however, partners are welcome to pursue these policy strategies*

Strategy	Strategy description	Resource/Reference
Payday lending protections	Payday loans are short-term loans for which lenders often charge predatory fees and interest rates. These fees and interest rates force borrowers to refinance loans over a short period of time, resulting in loss of assets.	"States could prohibit payday loans outright … or impose a 36% or less annual rate cap, inclusive of all fees and charges." [22] Community organizations and credit lenders could also partner to provide access to safe, affordable credit options in the community, such as those offered by credit unions. *ACS CAN does not have organizational positions on these policies; however, partners are welcome to pursue these policy strategies.*
Partnerships with anchor institutions	Anchor institutions are entrenched in their community by mission, invested capital, or relationships to customers, employees, and vendors and can directly improve financial capability of their community.	Anchor institutions can improve financial stability at the community level by paying a living wage; instituting paid family sick leave; procuring services from local minority-owned businesses; supporting a pipeline of jobs among diverse communities through workforce development; providing financial support to local arts and cultural development; and investing in initiatives such as employment, income, and workforce development. [23,24] For example, ProMedica, a nonprofit integrated health care system serving Northwest Ohio and Southeast Michigan, is investing in small businesses, particularly those that are women- and minority-owned, which increases employment opportunities for community members and decreases disparities. [25]
Partnerships with nonprofit hospitals	In addition to making an impact as an anchor institution (see above), nonprofit hospitals have opportunities to benefit the health of their communities by investing in community activities in exchange for tax exemptions.	Hospitals can increase the portion of community benefit dollars to address needs identified in the community health needs assessment. **The Community Benefit Insight tool** describes ways nonprofit hospitals in your community are using community benefit dollars.

Strategy	Strategy description	Resource/Reference
Partnerships with financial capability services and integration in workplaces, health systems, and human services programs	Financial capability is defined as "the capacity, based on knowledge, skills, and access, to manage financial resources effectively."[26] Financial capability can shield against financial hardship and promote financial well-being on the personal and community levels. Financial capability services include financial education (workshops or classes on topics such as how to budget, save, manage credit, reduce debt, and access tax credits), financial coaching (one-on-one interactions designed to empower clients to set and achieve their financial goals), and financial counseling (one-on-one sessions led by the counselor to help clients address specific matters such as purchasing a home).	Medical financial partnership is a shared commitment between a health care provider and a financial capability service provider to improve the health and financial well-being of a population. While the nature of these partnerships differs depending on capacity and other local factors, they typically include an assessment of financial needs and the provision of financial capability services.[27] For example, ProMedica, a nonprofit integrated health care system serving Northwest Ohio and Southeast Michigan, has committed to addressing the social determinants of health, including poverty. They offer free financial coaching and tax preparation services at a ProMedica-operated Financial Opportunity Center.[28]
Medical legal partnerships	Medical legal partnerships allow primary care providers to make referrals to on-site attorneys, who assist patients with challenges in areas such as income support, food, housing, immigration, and disability and family law. [29]	The National Center for Medical Legal Partnership provides information on the need and impact of medical legal partnerships. They demonstrate that legal services to address social needs result in decreased hospital admission rates, increased adherence to medications, decreased stress and improvements in mental health, increased use of preventive care, and increased reimbursement of care costs for patients.[30]
Financial distress and eligibility for public benefits screening	Health care professionals can screen their patients to identify financial distress and make referrals through social services and community resources.	The Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE) from the National Association of Community Health Centers and The Accountable Health Communities Health-Related Social Needs Screening Tool from the Centers for Medicare & Medicaid Services help health centers and other providers collect patient data to better understand their patient's social determinants of health needs, including employment and income.[31,32] Data can be used to guide integrated services for patients, and examples of ways to address associated risks are provided.[33]

Food Security and Access to Healthy Foods to Support Cancer Prevention, Treatment, and Survivorship

Through the Cancer Lens

Patient experience case study: Billy is an obese 65-year-old male who has recently been diagnosed with colorectal cancer. Over the years, his primary care doctor has advised him that eating a healthy diet and staying active could help reduce his risk of several cancers as well as diabetes and heart disease. And now, his cancer care team recommends that he maintain a healthy lifestyle to improve his chances of survival. However, there are no affordable grocery stores in Billy's neighborhood or nearby. Instead, there are plenty of corner stores and fast food chains within walking distance. It takes him two hours round trip to travel to the grocery store by bus. How can Billy follow the advice of his care team and make healthy choices

when there are only unhealthy choices where he lives? Is he going to feel well enough during treatment to make the two-hour trip to the grocery store? Even if he has a family member, friend, or neighbor to help him get groceries, can he afford to pay for the healthy foods he should eat?

At least 42% of newly diagnosed cancers in the US – about 740,000 cases in 2019 – are potentially avoidable, including the 18% that are caused by a combination of excess body weight, physical inactivity, excess alcohol consumption, and poor nutrition.[34] Obesity remains a significant public health crisis with over 71% of adults over the age of 20 being overweight or obese.[36] Access

to healthy foods is essential to help reduce the risk of cancer, and maintaining a healthy weight helps prevent the development of 13 cancers.[37]

During treatment and beyond, cancer survivorship presents a unique opportunity to improve dietary quality, as individuals are often motivated to implement behavior change aligning with evidence-based guidelines in an effort to improve their mental and physical health.[38, 39] Cancer treatment can have a metabolic effect on patients' nutrient intake, and side effects from treatment can lead to malnutrition.[40, 41] For cancer survivors, obesity increases the risk of recurrence and second primary tumors and decreases survival for several cancers. All these issues can impact patients' survival and diminish their quality of life, especially among racial and ethnic minority groups.[42] Access to healthy foods can help people stay and feel as well as possible during and after cancer treatment.

Adults who closely adhere to lifestyle cancer prevention recommendations for nutrition and physical activity are less likely to be diagnosed with and die from cancer.[43, 44] However, neighborhoods like Billy's are food insecure, meaning nutrient-rich foods are harder or too expensive to obtain, while nutrient-poor foods are abundant, often highly marketed, cheaper, and convenient to access.[45, 46, 47, 48] These neighborhoods are often where economically and socially disadvantaged populations live due to decades of racist and discriminatory national, state, and local policies.[49] Further, low-income and racial/ethnic minority populations have physical environment barriers to overcome to access healthy food options. Personal responsibility is important to be healthy; however, people can't improve their diets or take personal action to prevent and survive cancer if they don't have convenient and cheap access to quality healthy food.

Evidence-based Strategies and Practices

What community-level, lasting solutions could we implement to increase access to healthy foods? Following are some possible strategies.

Strategy	Strategy description	Resource/Reference
Patient screening and referral	Health systems are screening patients for food insecurity, assessing for food insecurity in the community, and acting to address the needs of their patients.	Toolkits and training are available to help health care professionals with these screenings. [50,51,52,53] For example, the **Hunger Vital Sign, a 2-item food insecurity screener** identifies households with food insecurity. When categorized as food insecure, patients are referred to appropriate support programs, such as the Supplemental Nutrition Assistance Program (SNAP); Women, Infants, and Children (WIC) food and nutrition service; National School Lunch Program (NSLP); Child and Adult Care Food Program (CACFP); Summer Food Service Program (SFSP); Meals on Wheels America; and local programs, such as food banks that also provide food box (i.e., containing nutritious foods for people who need assistance) and home-delivery programs, food pantries, and mobile produce distributions. Referral methods should involve navigation by volunteers, community health workers, social workers, or case managers.[54] At Kaiser Permanente, Colorado, they found having their local food pantry call the patient – instead of giving the patient the food pantry's phone number and placing the burden of follow-up on the patient – increased successful linkages from 5% to 75%.[55] Health systems can also make food insecurity part of the community health needs assessment or conduct community food assessments.[56,57] Health systems often refer patients to community resources and services. In addition to referrals to community resources, more sustainable solutions are needed to further reduce stress and minimize obstacles for patients who already have other financial and societal obstacles they are trying to overcome. For example, ProMedica is a nonprofit integrated health care system headquartered in Toledo, Ohio, serving Northwest Ohio and Southeast Michigan. After discovering their patients experienced food insecurity and hunger due to inadequate access to healthy affordable foods, they opened their own market in the central part of the city.[58] The market location also provides nutrition education, skill building, and financial counseling to further help their patients and the community. ProMedica's primary care physicians screen patients for hunger and refer eligible patients to the health care system's food pharmacies located at two of their locations where they can obtain community resources, a bag full of healthy food to feed their family for up to three days, and nutrition counseling.[59] This effort reduced hospital readmission rates by 53% for 4,000 patients who were screened and completed a food pharmacy referral.[60] In addition, since 2011, Memorial Sloan Kettering Cancer Center, the Food Bank for New York City, and other collaborators have provided medically tailored food pantries in eight hospitals for over 2,400 medically underserved cancer patients and their families.[61,62]

Strategy	Strategy description	Resource/Reference
Corporate partnerships	Corporate partners are sponsoring efforts specific to food insecurity.	For example, as a large, national food retailer, Kroger has leveraged their resources to provide access to healthy foods for low-income residents in the communities they serve. They are a retail partner for the Fresh Savings Program in Mississippi and Tennessee. The program provides SNAP customers who purchase fresh fruits and vegetables with their Electronic Benefit Transfer (EBT) Card with a 50% off coupon for their next produce purchase, up to $10 off. Kroger also supports Kennesaw State University's CARE (campus awareness, resource, and empowerment services) program in Atlanta, Georgia. The program offers a campus food pantry and free food to students who are experiencing food insecurity. In Richmond, Virginia, Kroger donated a new refrigerated box truck to Feedmore, a local food bank. This has the potential to increase capacity to direct fresh food to Richmond's food deserts. In 2015, Pick'n Save and the Hunger Task Force of Milwaukee partnered to launch a mobile food market. The mobile market, which visits underserved areas, is stocked with fresh fruits and vegetables that are offered at a 25% discount through the Food Insecurity Nutrition Incentive (FINI) grant. ACS Hope Lodge® communities' offerings vary across the country and, at times, they receive generous donations from community partners in the form of gift cards or food for patients in need. However, this is not a guaranteed service and securing funding for this is not currently part of the Hope Lodge strategy. Establishing partnerships with local grocery stores for food donations could help fulfill this need.
Partnerships with nonprofit hospitals	In addition to making an impact as an anchor institution (see page 5), nonprofit hospitals have opportunities to benefit the health of their communities by investing in community activities in exchange for tax exemptions.	Hospitals can increase the portion of community benefit dollars to address needs identified in the community health needs assessment. **The Community Benefit Insight tool** describes ways nonprofit hospitals in your community are using community benefit dollars. Hospitals can also use their community health needs assessment to better understand systemic issues impacting food security and access to healthy foods.
Summer Food Service Program	Hospitals can participate in the USDA's Summer Food Service Program by being a feeding site for kids in their community or partner with other community organizations to offer lunches.	The Food Research and Action Center has a **blog** highlighting the role hospitals can play.[63] Arkansas Children's Hospital in Little Rock partnered with the US Department of Agriculture to offer free healthy lunches to children on campus and in clinics. The program initially focused on summer lunches, but it now serves lunches year-round.[64]

Strategy	Strategy description	Resource/Reference
Healthy food service guidelines	Hospitals, community health centers, cancer centers, and other systems could do their part by adopting healthy food service guidelines or other nutrition standards to help increase healthier food options for their employees, patients, and their families.	The CDC has a **toolkit** explaining how health systems can create healthier food environments.[65] The American Hospital Association's Health Research & Educational Trust and the National Association of Community Health Centers have technical resources and case studies that highlight promising examples for how health systems are addressing healthy food access and food insecurity.[66, 67] As mentioned above, ACS CAN works to establish, maintain, strengthen, and implement evidence-based nutrition standards for all foods and beverages sold or served in schools, increasing funding food access-related programs. *Advocacy-related efforts should be discussed and coordinated with ACS CAN.*
Healthy food initiatives in food banks and community centers	Work with food banks to offer emergency or medically tailored food boxes and opportunities for nutrition education such as on-site cooking demonstrations and recipe tastings.	Multiple studies show food pantry clients are interested in receiving healthier foods.[68, 69] A study assessing the benefits of providing medically tailored food for frail, homebound, and/or chronically ill adults showed improvements in food insecurity, disease self-management, and utilization of health care services.[70] In Broward County, Florida, patients who screened positive for food insecurity were: connected to a Feeding South Florida representative, given an emergency food box containing food staple items, and referred to state and federal assistance programs.
Fruit and vegetable incentive programs	Offer people who have low incomes matching funds to purchase healthy foods, especially fresh fruits and vegetables, at farmers markets and grocery stores.	**County Health Rankings and Roadmaps' What Works for Health** provides information regarding the scientific evidence that supports these strategies and specific examples.[71] As mentioned above, ACS CAN has state-level efforts advocating for increased access to healthy foods such a policies and incentives for retailers to offer healthy food and beverage options and/or for healthy food retailers to locate in underserved areas. *Advocacy-related efforts should be discussed and coordinated with ACS CAN.*

Strategy	Strategy description	Resource/Reference
Healthy food in convenience stores	Work with convenience stores, corner stores, and gas station markets to offer healthy foods including fresh produce.	County Health Rankings and Roadmaps' What Works for Health provides information regarding the scientific evidence that supports these strategies and specific examples.[71] As mentioned above, ACS CAN has state-level efforts advocating for increased access to healthy foods such a policies and incentives for retailers to offer healthy food and beverage options and/or for healthy food retailers to locate in underserved areas. *Advocacy-related efforts should be discussed and coordinated with ACS CAN.*
Partner with transportation providers	Collaborate with city/ county transit, planning, or transportation agencies/ departments to improve transportation options for residents.	Transit, planning, or transportation agencies develop plans to meet the transportation needs of residents. Work with these agencies to engage community residents to understand how a bus or rail route can best meet their needs of getting to the grocery store. Transit agencies can also help provide space for healthy markets, making it convenient for transit users and people living close by to have easy access to healthy foods. The **Safe Routes to School National Partnership** has a helpful resource for tactics.[72]

Transportation and Mobility to Support Cancer Prevention, Early Detection, Treatment, and Survivorship Services

Through the Cancer Lens

Patient experience case study: Mary is the mother of an 11-year old girl and 12-year-old boy. She saw a public service announcement that recommends that her kids get vaccinated against HPV, which consists of a series of two shots. Having a family history of cervical cancer, Mary understands the importance of the vaccine. The nearest clinic is 1½ hours away, public transportation is unreliable at best, and the family car is on its last leg. Mary decides to take her kids by bus to the clinic to get the first vaccine in the series. She is told to bring them back for the second dose, which should be given within six to 12 months. How will she be able to get her children to the clinic a second time with all that's going on in her day-to-day life?

Transportation includes mobility via foot, wheelchair, bike, transit, or car. It allows people to get to health care services and increase opportunities to prevent, treat, and survive cancer. Neighborhoods with good transportation systems are more mobile. They have better constructed roads and connectivity, and more accessible public transit and sidewalks, which ease congestion and promote safety to and from the health care system.

Lack of transportation or lack of access to reliable and timely transportation is a structural barrier to health care, especially for people who have chronic conditions and have a long-term treatment plan requiring frequent doctor appointments and

medication. Factors that inhibit patient mobility include cost, safety, vehicle access, public transit access (e.g., distance, availability), mode of travel, and travel burden (e.g., distance and time).[73] Neighborhoods where low-income people and people of color live tend to face more mobility barriers due to decades of racist and discriminatory national, state, and local policies shaping our transportation systems. These communities are left out of development opportunities and, when there is new development, they are displaced and pushed farther out from city centers, where many health care systems are located.[74]

Lack of access to transportation has direct consequences on cancer prevention, treatment, and survivorship. For patients who need preventive care and screening (e.g., HPV vaccination, mammogram, colonoscopy), need follow-up appointments after an abnormal test, or have recurring treatment appointments, lack of transportation could translate to delayed cancer diagnoses, treatment initiation, and treatment completion.[75, 76, 77, 78, 79, 80] Ultimately, mobility impacts patients' chances of survival. The type of transportation must also be considered. For example, access to public transportation can be helpful for some, but it may not be the best option for cancer patients who have nausea or compromised immune systems.

In 2006, approximately 3.6 million Americans delayed or missed a medical appointment due to lack of transportation.[81] In addition to the health of the patient being affected, the cost to the US health care system from missed medical appointments is more than $150 billion per year.[82]

Evidence-based Strategies and Practices

What community-level, systemic, lasting solutions could we implement to improve transportation and mobility to cancer prevention, early detection, treatment, and survivorship care? Following are some possible strategies.

Strategy	Strategy description	Resource/Reference
Policy and transportation infrastructure improvements	There should be cross-sector collaboration between planning, transportation, public health, public works, health systems, and academic and community-based organizations at state and local levels to make the physical environments of communities more conducive to active living and healthier lifestyles and improve connectivity to destinations within communities, including health systems.	A systematic review examining public transportation use and physical activity found that use of public transit was associated with an additional 8 to 33 minutes of walking per day.[83] Strategies being used to improve transportation opportunities are: complete streets (e.g., streets designed to accommodate all users, ages, and abilities) and streetscape design (e.g., increased connectivity through sidewalks and walkways, safe methods for crossing streets), mixed use development (e.g., new construction that includes residential, commercial, and recreational uses), safe routes that support children and their families walking and biking to and from school, and public transportation systems that are accessible for all communities (e.g., buses and subways).[84] These strategies could be incorporated into hospital efforts associated with community health needs assessments. Health systems can enhance connectivity around their campuses or support efforts for the greater community. For example, Cooper Health Services in Camden, New Jersey, worked with Naik Consulting Group, P.C. to improve the design of the Cooper Health System Complex and the neighboring community by replacing or rehabilitating sidewalks and roads and planting more trees and a garden.[85]
Use of health impact assessments and community engagement to inform the development of transportation systems	Health impact assessments are being used to identify and address health effects of transportation policies, plans, and projects in urban and rural areas and low-income communities of color.	For example, when St. Paul, Minnesota, was identifying where to place its future light-rail line, community-based organizations used input and data from the community regarding the light-rail's potential impact on the community's health and sharing it with decision makers.[86] These data were used in developing the rail line running through low-income and immigrant communities to help mitigate and promote its impact on health. *Advocacy-related efforts should be discussed and coordinated with ACS CAN.*

Strategy	Strategy description	Resource/Reference
Patient screening for transportation barriers	Health care professionals can screen their patients to identify transportation problems and make referrals to community resources.	Protocol for Responding to and Assessing Patients' Assets, Risks, and Experiences (PRAPARE) helps health centers and other providers collect patient data to better understand their patients' social determinants of health needs, including transportation.[87] Data can be used to guide integrated services for patients, and examples of ways to address transportation risk are provided.[88] Health Leads also has a **Social Needs Screening Toolkit** that addresses patient difficulty accessing/affording transportation (medical or public).[89]
Organizational practices promoting the use of and access to transportation	A strong commitment to supporting transportation strategies within an organization's mission or activities can help patients and employees increase access and use of alternative transportation methods.	Organizations can increase incentives for public transportation for employees, such as transit pass reimbursements or discounts and partial payments or pretax payroll deductions.[90] For example, Seattle Children's Hospital engaged patients, employees, and community members in the development and implementation of the hospital's Comprehensive Transportation Plan. It includes strategies such as capital improvement investments; smart signals for better congestion movement; approaches to reduce vehicle trips and increase utilization of public transit, biking, and walking to and from their campus.[91]
Federal policy protecting access to transportation	The US Department of Health and Human Services' Office of Inspector General issued a Safe Harbor rule in December 2016 protecting the provision of free or discounted local transportation by eligible entities (e.g., health care providers such as hospitals and clinics) to Medicare or Medicaid beneficiaries, provided certain circumstances are met.	For example, using the Safe Harbor rule, Geisinger Health System launched pilots in two locations in 2018 free of charge to patients. The purpose of the pilot is to transport patients to non-emergency medical appointments at Geisinger facilities located in rural and urban areas of Pennsylvania. *Advocacy-related efforts should be discussed and coordinated with ACS CAN.*
Volunteer transportation to medical appointments	To improve access to transportation, organizations (including health systems) can leverage volunteers to provide direct transportation services to patients.	The ACS Road To Recovery® program is at the heart of our work of removing barriers to quality health care by providing patients transportation to treatment. In 2018, ACS provided nearly 480,000 one-way rides through volunteer drivers, partners, or community organizations. Volunteer drivers can be community members and employees who have an arrangement with their employer to provide patient rides on company time. In 2018, approximately 8,900 volunteers provided over 200,000 rides.[92]

Strategy	Strategy description	Resource/Reference
Cross-sector partnerships to medical appointments	Partnerships with commercial transportation vendors are an important strategy to tackling transportation roadblocks for patients. Transportation barriers can be reduced through community partnerships or programs and investments in programming or infrastructure to reduce travel for patients.	In 2018, ACS partnered with ridesharing provider Lyft in up to 16 markets. In these markets, ACS paid Lyft to help cancer patients get to their cancer treatments. ACS also worked with Transportation Network Companies (TNCs) in multiple regions to support transportation needs. Through these relationships, as well as many other transportation providers, ACS has significantly increased the number of rides provided in communities across the country. ACS partners with Ride Health in 22 markets across the country and with UZURV in an additional 27 markets.[93] Some health systems are directly contracting with companies like Lyft and TNCs to provide rides for their patients. Other health care organizations are collaborating with private sector entities to help patients get the care they need. Uber Health API integrates with existing health care technologies, which health care professionals can use to schedule rides up to 30 days in advance. Ford Motor Company's GoRide non-emergency medical transportation service helps patients – including older adults and people who use wheelchairs or have other mobility challenges – get to their medical appointments. Launched as a pilot in 2017 with Beaumont Health, GoRide recently expanded to provide transportation services to the larger Beaumont Health network of more than 200 facilities in Southeast Michigan.[94] This transportation service can also be booked up to 30 days in advance. ACS also contracts and coordinates with transportation vendors, including public and commercial vendors, to provide donated, reduced-cost, or at-cost transportation to cancer patients in need. In addition, ACS helps connect cancer patients who call **1-800-227-2345** or who visit **cancer.org** with hundreds of community resources around the country that provide transportation services.

Strategy	Strategy description	Resource/Reference
Partnerships with nonprofit hospitals	In addition to making an impact as an anchor institution (see page 5), nonprofit hospitals have opportunities to benefit the health of their communities by investing in community activities in exchange for tax exemptions.	Hospitals can increase the portion of community benefit dollars to address needs identified in the community health needs assessment. **The Community Benefit Insight tool** describes ways nonprofit hospitals in your community are using community benefit dollars. Hospitals can also use their community health needs assessment to better understand systemic issues impacting transportation and mobility.

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