EPISCOPAL HEALTH FOUNDATION

HEALTHY PLACES TOOLKIT

A PRACTICAL GUIDE TO IMPROVING COMMUNITY HEALTH

EPISCOPAL HEALTH FOUNDATION

ASAKURA ROBINSON

A NOTE FROM JO Z. CARCEDO

Our neighborhoods and the physical landscapes that encompass them shape our health and well-being. The Episcopal Health Foundation (EHF) has always focused on improving community health, rather than just healthcare. Our strategic goals and strategies prioritize community-based health interventions that build skills that reduce the risks to health and create a supportive environment for the maintenance of healthy behaviors by addressing the underlying, non-medical causes of poor health.

We believe that a healthy community is one in which local groups from all parts of the community work together to prevent disease and make healthy living options accessible. It also helps to reduce health inequities caused by differences in income, education, race and ethnicity, location, and other factors that can affect health.

In 2016, EHF launched the Texas Community Centered Health Home (CCHH) Initiative which invited community clinics and their neighborhood partners to embark upon work which would address the community conditions that affected the health of their patients and neighbors. CCHH clinics and partners focused on intentional action to promote change that was expressed in different ways depending on the needs of the community. For example, many prioritized walkability, recreation, community gardens and other health-promoting resources like playgrounds and grocery stores.

As a result of this important work, EHF worked with the firm of Asakura Robinson, a planning, urban design, and landscape architecture firm, to develop the Healthy Places Toolkit to help communities understand and navigate the regulations and policies pertaining to the built environment, and to identify resources which are available to develop and facilitate these types of projects. Designed as a 'know-before-you-go' resource, the intent of the toolkit is to provide relevant information on what communities should know and consider before undertaking built environment projects. It also offers adaptable resources for front-line staff that enable them to learn about an issue and identify approaches for addressing it.

We want to thank all of those who contributed to Healthy Places Toolkit, from the team at Asakura Robinson to the community clinics and their partners whose work was the inspiration for creating it. It's another example of how we can improve #HealthNotJustHealthCare in Texas and beyond.

Jo Z. Carcedo
Vice President for Grants
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CONTENTS

1
WHAT IS THE HEALTHY PLACES TOOLKIT?

Introduction

Your ZIP code should not determine your lifespan or your quality of life. However, all too often this is the case for those living in neighborhoods with dangerous air pollution, unwalkable streets, and few grocery stores. This Healthy Places Toolkit was written to provide healthcare clinics with ideas on how they can improve community health outcomes by addressing many of these issues that are influenced by the places we live, also known as the built environment.
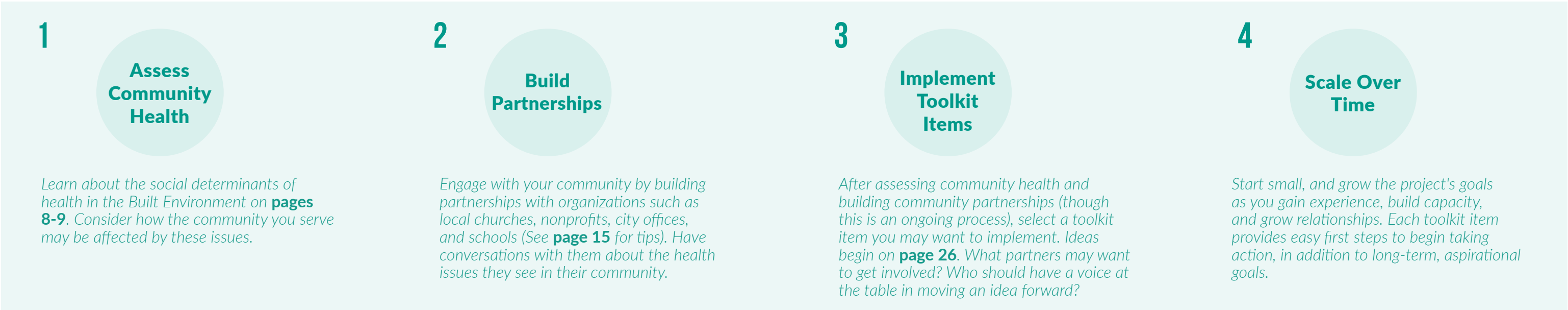
This Toolkit provides background on how the built environment affects health and demonstrates how a holistic view of community health includes not only individual health outcomes but how we are addressing institutionalized racism and health equity issues in our communities.

When considering implementing these toolkit items, clinics should first consider the community context and directly engage with community members to determine what the most pressing issues are in the neighborhoods they serve. The strategies agreed upon by the community and the clinic will provide the most help to the neighborhood.

While these ideas speak directly to community-based clinics, they can be undertaken by a wide variety of organizations, including school districts, city urban planning offices, public health departments, and non-profits nationwide. For this reason, throughout the document, we provide resources that address health and the built environment across many disciplines.

* This document also contains a comprehensive Glossary of Terms used throughout the document starting on Page 78.

How to Use This Toolkit

1

Assess Community Health

Learn about the social determinants of health in the Built Environment on **pages 8-9**. *Consider how the community you serve may be affected by these issues.*

2

Build Partnerships

Engage with your community by building partnerships with organizations such as local churches, nonprofits, city offices, and schools (See **page 15** *for tips). Have conversations with them about the health issues they see in their community.*

3

Implement Toolkit Items

After assessing community health and building community partnerships (though this is an ongoing process), select a toolkit item you may want to implement. Ideas begin on **page 26**. *What partners may want to get involved? Who should have a voice at the table in moving an idea forward?*

4

Scale Over Time

Start small, and grow the project's goals as you gain experience, build capacity, and grow relationships. Each toolkit item provides easy first steps to begin taking action, in addition to long-term, aspirational goals.

2

HOW DOES THE BUILT ENVIRONMENT AFFECT HEALTH?

Social Determinants of Health

Health outcomes are determined by many complex, interacting factors throughout our everyday lives. While the quality of healthcare from hospitals and clinics is often at the forefront of public conversations about health, in truth it is only a small factor in public health outcomes. Some of the most influential factors that affect whether we get sick or stay healthy are the day-to-day experiences of our lives — our relationships, the air we breathe, how we get to work, and the quality of our housing are just a few examples. If it is unsafe to walk in our neighborhoods, then it is unlikely we will walk for exercise, to the grocery store, or to work, and this impacts a person's risk of becoming overweight. This is an example of how social determinants of health (SDOH) play a large role in health outcomes. SDOH can be defined as the factors apart from medical care that influence health, such as lifestyles, life experiences, and the conditions in which people live. According to the U.S. Center for Disease Control (CDC), SDOH includes factors like educational levels, economic stability, social and community context, access to healthcare, and the built environment. By acknowledging systemic inequities in our society that have translated to health disparities, we can we can address poor health at the source. A significant portion of health outcomes are determined by the quality of our neighborhoods and the places we live, also known as the built environment. When initiatives are taken to improve the built environment and our relationships to others in our neighborhoods, public health improves.

The Built Environment

This Toolkit focuses on improving social determinants of health influenced by the built environment, which is defined by the physical environment that provides the setting for us to live, work, play, and socialize, including our streets, sidewalks, neighborhood relationships, water quality, air and soil quality, and housing. The quality of the built environment has a measurable effect on health. For example, unsafe or nonexistent sidewalks and bicycle routes discourage walking and biking and contribute to sedentary lifestyles. This lack of physical activity will often lead to poor health outcomes such as obesity, cardiovascular disease, diabetes, and some types of cancer. This Healthy Places Toolkit provides ideas for programs, policy advocacy, and projects that are influenced by the social determinants of health that relate to the built environment, including: Food, Safety, our Home, Community, Transportation, Nature, Air and Soil, Water, and Heat. See Table 1 on the right for a description of how each aspect impacts the health of our communities.

Initiatives that seek to address these social determinants of health are not only important for improving health outcomes, but also for reducing health disparities that have arisen from widespread social and economic disadvantages in communities of color, very rural, and very urban communities. For these populations, achieving better health is not as easy as choosing to eat healthier or walk to work. Systemic racism and historic disinvestments in communities of color has often meant that many healthy opportunities are difficult or impossible to access, and that entire communities are disproportionately exposed to harmful environmental conditions.

Social Determinants of Health

CDC'S SOCIAL DETERMINANTS OF HEALTH

1. Education
2. Health and Healthcare
3. Social and Community Context
4. Economic Stability
5. Neighborhood and Built Environment

HOME • WATER • NATURE • AIR + SOIL • SAFETY • COMMUNITY • URBAN HEAT • FOOD • TRANSPORTATION

Topics Addressed by the Healthy Places Toolkit

Social Determinants of Health in the Built Environment

SDOH	DESCRIPTION
Food	Nutrition is an important aspect of overall health. Lack of access to healthy and affordable foods can lead to poor nutrition and chronic disease.
Safety	Crime and violence are public health issues and symptoms of larger, systemic social inequities; safe and well-maintained communities impact physical and emotional well-being. Feeling safe also improves the ability to build community and social cohesion.
Home	Affordability and quality of housing impact health because poor-quality housing can exacerbate chronic health conditions like asthma. Housing instability and displacement also contribute to stress and create trauma.
Community	Social cohesion and community-building can improve mental health and prevent isolation within a community. Isolation can limit access to the networks needed to support health.
Transportation	Residents of neighborhoods with safe and convenient transportation options, like walking, bicycling, or riding public transportation, tend to be more physically active than those in neighborhoods dependent on private car access.
Nature	Access to parks and nature impacts physical and emotional well-being. Time spent in nature has been shown to decrease stress and increase self-confidence.
Air + Soil	Poor air and soil quality impact physical health through direct and indirect exposure to toxic chemicals and pollutants. These chemicals can be the result of industrial facilities, automobiles, or industrial waste.
Water	Poor water quality directly impacts human health when associated with regional drinking water supplies, in scenarios where fisheries are contaminated by pollutants, and in bodies of water where people swim. Repetitive and/or catastrophic flood events often displace communities from their homes and cause mental trauma.
Heat	Extreme heat, longer durations of heat events, or inability to recover from hot days all contribute to heat-related illness and even death. Seniors, transit-dependent communities, and others with existing health conditions are the most vulnerable to heat-related issues.

Table 1: The Social Determinants of Health in the Built Environment addressed in this report.
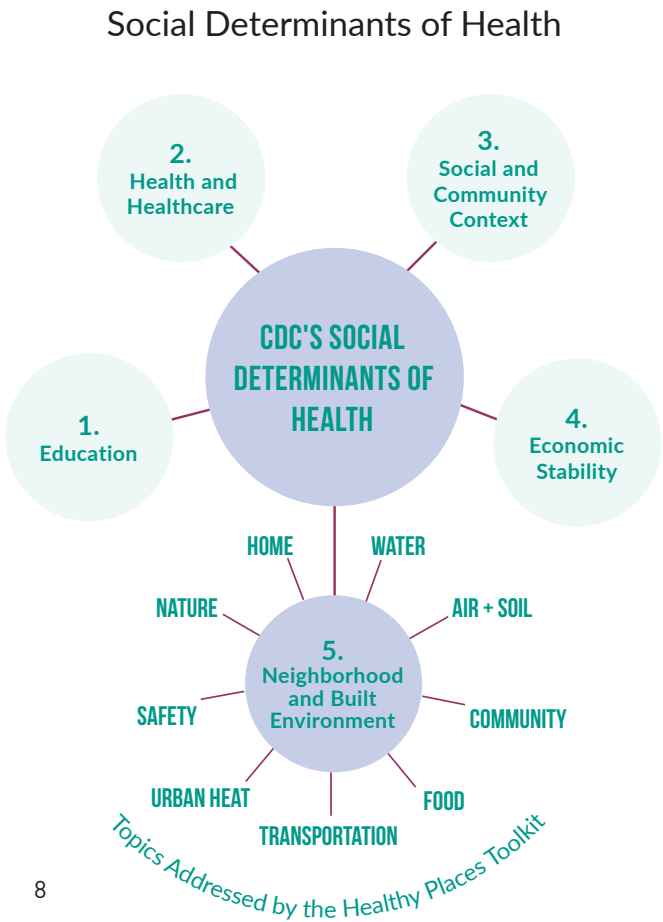
Health Equity

Health disparities occur when certain social or demographic groups are unable to attain their full health potential and experience sickness as a result of structural barriers, often caused by institutionalized racism, such as poverty, industrial pollution, or a disinvestment in infrastructure. These disparities can be identified through differences in incidences of diseases, mortality, and other adverse health conditions. Health disparities are often seen between different races, gender identities, sexual orientations, socioeconomic status, and geographic locations.

Disparities in the quality of the built environment, especially in low-income communities, are often very apparent — all one needs to do is drive or walk from a wealthy or middle-income neighborhood to a low-income neighborhood. The quality of road infrastructure, housing, air, and other factors tend to decrease. These communities see less investment in the built environment, such as sidewalk improvements, public transportation, and grocery stores. Polluting industries are often situated next to low-income areas or communities of color, and health outcomes suffer as a result. These inequities are compounded by the poverty that is often found in these communities, especially within urban core or rural neighborhoods.

The goal of this Toolkit is to assist clinics in leading and supporting initiatives that help to close this disparity gap and achieve health equity. Health equity is accomplished when every person has the opportunity to realize their full health potential. Healthcare clinics, nonprofits, and other organizations seeking to work upstream of poor health outcomes in their communities through built environment initiatives must understand the different geographic and cultural contexts of the communities they serve. Two critical differences lay in communities of color and urban vs. non-urban (rural) contexts.

Racial Equity

Clinic initiatives that seek to close the health disparity gap in the populations they serve must take into account the social, political, and historical context of race and communities of color. For communities of color in the United States, health disparities take on many forms, include higher rates of chronic disease such as cardiovascular disease, diabetes, obesity and premature death compared to whites. These disparities are especially pronounced in the built environment, where historic disinvestment in communities of color have deteriorated the quality of their neighborhoods. Lower access to parks and greenspace in communities of color is one example of disparities in the quality of the built environment. A recent study in ten U.S. cities showed that communities of color and low-income populations had less access to urban vegetation, parks, and greenspace in their neighborhoods than higher income groups and whites.[1]

Health disparities often compound one another. For example, communities of color are more likely to suffer from chronic health conditions, like cardiovascular disease, diabetes, and obesity. These conditions put them at greater risk for heat-related illnesses. Low-income and neighborhoods of color are often some of the hottest areas of cities, often due to the lack of vegetation and green space.[2] Compounding factors such as these can greatly burden the health of these populations.

Urban and Non-Urban Contexts

Non-urban communities are more likely to experience barriers to healthcare access due to a lower density of primary care physicians and hospitals. Access to healthcare further deteriorates if there is a lack of public transportation, which is typical of non-urban contexts, poor road conditions, and long traveling distances to hospitals. These access issues similarly extend to accessing other health-supporting behaviors such as grocery stores and healthy food retailers. The lack of public transit and quality road and sidewalk infrastructure is also a factor in physical activity. Only 47% of rural residents meet the government's aerobic activity recommendations; however, in larger metropolitan areas, 52% of residents meet the government's recommendation for aerobic activity.[3]

In urban areas, communities of color are less likely to have access to healthy grocery store options. In urban areas, low-income and communities of color have less access to green space, parks, and vegetation. This lack of access to parks decreases physical activity and contributes to poor health outcomes. Although urban areas tend to have more transit options than non-urban areas, there are striking disparities in service between average and low-income neighborhoods. African American, Hispanic/Latinx, senior, and low-income communities often have inferior transit, overcrowding on transit, and routes that do not match their desired trip patterns. In addition, a large share of transit-dependent riders (those without vehicles) are low-income, which enhances the effects of this disparity on their daily lives.[4]

As of 2017, 74.3% percent of adults in the Houston-Baytown Sugarland Metropolitan Statistical Area (MSA) in Texas are overweight or obese, and there are disparities in this statistic between races, with 83% of blacks versus 72% percent of whites overweight or obese.[5]

3

HOW CAN CLINICS ADDRESS THE ROOT CAUSES OF POOR HEALTH?

The Three "P's"

Healthcare clinics provide high-quality, affordable care to people when they are sick. However, most clinics are only able to treat the symptoms of chronic health issues resulting from conditions like diabetes, heart disease, and asthma. Clinics can help address some of the root causes of poor health caused by social determinants of health by complementing healthcare treatment with community-based action in the places they serve. Some of the most impactful community actions are programs, policies, projects, or a combination of all three.

Projects

Projects require physical and financial capital. They are often built works, such as new sidewalks, a new park, or community gardens. Projects are especially important when improving aspects of health affected by the built environment as they directly improve the quality of the urban or rural experience. Other examples of projects may include tree planting, bike lane construction, and pocket parks.
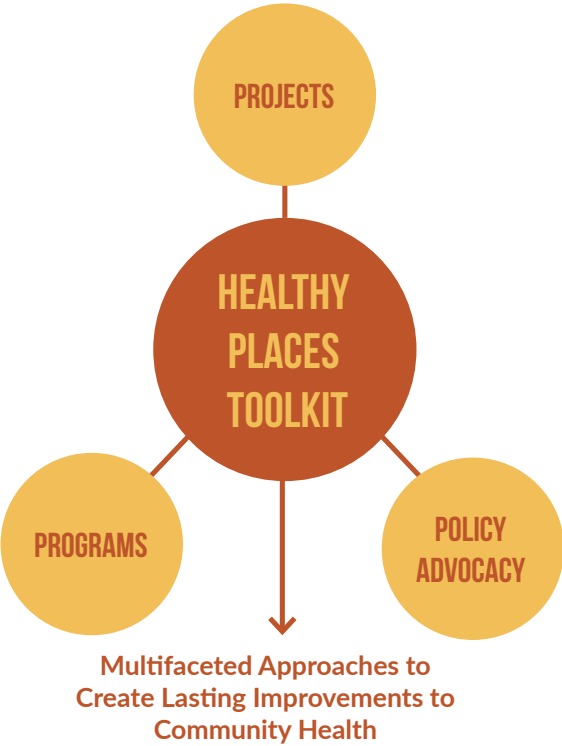
Programs

Programs are short- or long-term interventions organized by clinics or their partners that achieve a long-term, mission-driven goal. Clinics traditionally serve the public and improve public health through healthcare delivery. However, if clinics seek to address the root causes of poor health, they must consider interventions outside of traditional healthcare delivery. Programs may include classes and education, healthy food drives, a bike-share program, or any other intervention that seeks to improve circumstances that contribute to poor health outcomes. Weekly classes on nutrition and healthy eating hosted by the clinic are an example of a program that seeks to address the root causes of obesity and diabetes.

Policy Advocacy

Policy advocacy is an attempt to influence political decision-making in support of desired legislation. Clinics are in a unique position to understand how laws and policies affect public health because they see the outcomes of legislation as poor health that leads to clinic or hospital visits. It is often obvious how laws support or degrade public health. For example, a city may not have a policy requiring all new roads to have sidewalks. Roads without sidewalks are a substantial barrier to people walking or biking to work or running simple errands. Clinic staff can act as policy advocates to influence local, state, and federal governments to change policies that are harmful to public health or perpetuate health inequities. Influencing municipal policy is likely beyond the scope of any individual clinic, but Doctor's or Clinic Associations may already have a lobbying group. Partnering with these organizations, or creating such organizations, will help clinics change existing policies or shape new policies as they are created.

PROJECTS

HEALTHY PLACES TOOLKIT

PROGRAMS

POLICY ADVOCACY

Multifaceted Approaches to Create Lasting Improvements to Community Health

The Role of Clinics

Ambitious and systemic change through projects, programs, and policies cannot be achieved alone. Clinics may more often serve as the coordinator and convenor of many partners working together to address issues related to health and the built environment. With this understanding, the Healthy Places Toolkit makes recommendations for short-term, low-investment interventions clinics can do alone, as well as long-term interventions that may require multiple partnerships — from local governments to nonprofits to the community itself. Co-creation with the community is one of the best ways to respond directly to their needs and ensure program buy-in. Clinics must also take into account trends of gentrification and displacement in communities. This section also provides several strategies to mitigate the risk of community displacement.

Partnerships

The success of this work hinges on the creation of partnerships with others in the community, some of whom may already be a part of your network, but others who are not. The ability to communicate effectively and empathetically with existing and potential partners is a key component of successfully implementing the tools in this Toolkit. Below are some considerations when initially reaching out and cultivating new relationships to further this work:

- Use your network first to connect with potential partners. A connection through a valued friend or colleague helps build trust with a new connection from the beginning.

- Your networks only go so far. Connecting with communities outside of your personal network requires extra effort but is important! Search on Google, Facebook, Eventbrite, and other event and social sites online to find new groups outside of your network. Attend events you would not normally attend and find new connections.

- If you find an organization you want to connect with, don't be afraid to "cold call." Do your best to find the right person in an organization to reach out to rather than emailing a general contact email. After an initial email, send one follow-up email within two weeks and if needed, make one direct phone call.

If You're Not a Clinic

The approaches in this Toolkit are not solely for health clinics; they can be utilized by anyone looking to address health outcomes influenced by the built environment. If you are not a clinic and you are reading this, the Toolkit offers varied approaches to addressing health as well as ideas for potential partners. There are many ways in which these projects, policies, programs, and partnerships can be built and sustained. Partnerships especially can enable outcomes with high impact when varied resources and perspectives come together. Community organizations, nonprofits, and municipalities can have different spheres of influence, stakeholders, and funding that make their project partnerships broad in reach and deep in impact.

- Always seek to understand first. It is important to start new conversations with an open-minded desire to learn about what is important to others. Not only does this build trust, but once you learn what others value, you can frame your passions and your "asks" based on what you know will be most relevant to them and find opportunities to collaborate that accomplish the multiple goals of different stakeholders.

- Communicate about your passion, but do not start with what you want to accomplish. It is also vitally important that you tell the story of why this work is important to you.

- Be respectful of others' priorities and bandwidth. Many of the potential partners and collaborators on this work have job-related and personal priorities they are trying to balance. If this work is perceived to be or is an added commitment for a potential collaborator, try to better frame how this work is complementary to their priorities, or adapt your "ask" to align with both of your goals. Convey your desire to not overburden someone's time and even suggest ways they could scale their involvement based on their availability.

- Commit to doing more work to cultivate the relationship. Never leave a meeting without committing to moving next steps forward if mutually agreed upon. If your new collaborator committed at some point in the conversation to taking some action, make sure to recap those commitments at the end of the conversation. Asking "in the near term, is there anything I, or my organization/clinic, can do to help support you and your goals?" is also another way you can continue to stay engaged with new partners and build trust.

Four Steps to Partnership Development

1 USE YOUR NETWORK

2 GET OUT OF YOUR COMFORT ZONE

3 SEEK TO UNDERSTAND

4 BUILD THE RELATIONSHIP

Displacement Mitigation

Clinics have an opportunity to provide support and resources for communities experiencing displacement and/or gentrification. Displacement is a process that can occur gradually (incremental rent or property tax increases; voluntarily floodplain buy-outs), or immediately (mass evictions). Displacement is often driven by a catalyst such as a new company headquarters in a neighborhood, a new park, or new retail investment. New developments indicate to developers, real estate agents, and landlords that the value of a neighborhood will rise because many of these new industries and amenities will attract people who can afford higher living costs.

While the dangers of displacement through community improvement exist, everyone deserves a high quality of life, and it is important to take action to improve community health and well-being. There are three main measures clinics can take to avoid displacing communities through improvements to the built environment:

1. **Provide mental health services and programming.** Displacement as well as the rising cost of rent can be a stressful and traumatic experience. Providing mental health care at reduced rates and programming about coping can be a way to support residents. Community health workers serve to bridge community members to clinics and ensure clinics support their communities in a culturally relevant way.

2. **Develop a referral system.** Local clinics can partner with local and state organizations that have a focus on affordable housing to create a referral system in order to help residents navigate their options. Clinics can help alleviate the burden put on residents who are trying to cope with displacement and assess their options, especially populations where translation services are needed. There are legal clinics that provide free professional legal services, nonprofits focused on affordable housing that can apply for grants to support affordable housing options, and co-located apartments that combine affordable housing and health services.

3. **Influence future development projects.** Clinics have become an important component of real estate development through partnerships with housing providers and/or developers to provide wrap-around care for new affordable housing developments, and sometimes help developments succeed by choosing to be a rent-paying tenant in a new development — helping the overall project economics. This is an effective approach towards securing affordable housing for residents. There are grant opportunities at the federal, state, and local level to support affordable housing. Clinics can create partnerships with universities, legal clinics, and nonprofits in order to influence future developments as well as ensure their longevity. To read about some opportunities for action, see the Home toolkit on **page 38**.

While it can be difficult to anticipate and prevent displacement, especially when the catalyst is a necessary improvement to existing infrastructure, there are ways in which clinics can partner and leverage resources to support the communities they serve through this process.

4

HOW TO USE THE HEALTHY PLACES TOOLKIT

Clinic Considerations

No two clinics are the same. Each one serves a different geographic area, has patients with various needs, and has a different operating budget and size. The social determinants of health that you address and the tools you consider should be influenced by the communities your clinic serves as well as your clinic's capacity. These considerations will help you select the Healthy Places Toolkit tools that will best enhance community health.

Clinic Patients

1 | What patterns of poor health do you see in the communities you serve?

Is there a high prevalence of diabetes and obesity? What about childhood asthma? Are depression and anxiety common? Consider the top two or three health concerns. Refer to the **Health Concerns Matrix (Table 2)** to select a social determinant of health topic that may be a root cause of the health problems you see. Review that topic area for an overview, and see what tools you may be able to implement.

2 | Is your clinic in an urban or non-urban environment?

Social determinants of health related to the built environment differ in different geographic contexts. The tools within this Toolkit seek to address a variety of these contexts. Refer to **page 11** to gain an understanding of differences in urban and non-urban contexts.

3 | Which groups does your clinic tend to serve?

Mostly elderly populations? Black residents? Hispanic/Latinx? Middle class or low income? Low income and communities of color are more likely to suffer from health disparities — that is, they are more likely to experience poor health than their white and middle-class peers. Each SDOH has health implications for each demographic group. For example, children and the elderly are the most at-risk for developing respiratory illness due to air pollution.[6] Race and income are also major factors in transportation — a large share of public transit riders are low-income, minority populations. Review the descriptions of SDOH to evaluate how the community you serve may be affected.

Clinic Operations

1 | Does your clinic have dedicated community-facing staff members?

Who typically organizes community events and initiatives? Some clinics have dedicated staff for community outreach. These positions are often funded by nonprofits such as the Episcopal Health Foundation in Texas. If your clinic doesn't have this, try to identify a team of volunteers who may be able to initiate some of these programs, policies, and projects, and who can facilitate conversations with the community to ensure your efforts align with their goals for their community.

2 | What size is your clinic?

How many patients do you see each day? What is your annual operating budget? Clinics operate at a range of budgets, patient volumes, and staffing numbers. This toolkit provides a range of options for clinics of various sizes. See the section on **page 22** for more information on clinic capacity.

3 | What relationships do you have with non-profits, community organizations, and local government within the communities you serve?

The impact of many of the tools in this Toolkit increases when clinics partner with local organizations as support or to lead these initiatives. Who have your partners been in the past? What organizations address topics such as parks conservation, bicycle advocacy, and urban agriculture? What churches are in your neighborhood? Evaluate these existing relationships for opportunities to collaborate. Find tips on how to build partnerships on **pages 15-16**.

Health Concerns Matrix

Health Concerns	Food	Safety	Home	Community	Transportation	Nature	Air + Soil	Water	Heat
Asthma			●			●	●		●
Cancer	●				●	●	●	●	
COPD							●		
Coronary Heart Disease	●				●	●			
Depression	●	●	●	●	●	●			
Diabetes	●					●			
High Blood Pressure	●					●			
High Cholesterol	●								
Injury			●	●	●				
Poor Respiratory Health						●	●		●
Stress		●	●	●		●			
Violence		●	●	●					

Table 2: Reference table of health outcomes and the toolkits that provide programs, projects, and policy advocacy ideas to address them.

Clinic Capacity

Some of the tools in this Toolkit may seem intimidating for small clinics or clinics in rural, remote communities with fewer resources. For this reason, each SDOH tool has three points of entry for clinics operating at various capacities and with varying levels of experience with community-facing initiatives. "Low Barrier" options are low-cost, quick wins clinics can implement to gain experience. These initiatives typically provide a health impact at scale of an individual. For example, clinics may provide a pamphlet about healthy cooking to a patient at the clinic (see the FoodRx Tool on **page 28**). As clinics gain experience, establish partnerships, and build momentum behind their efforts, they may move on to "Next Steps" and "Long-Term Opportunities." Long-Term Opportunities provide ideas for community-wide impact to begin systematically addressing health problems upstream of poor health. Clinics with a high operating budget or with strong community partnerships may choose to start with a "Next Steps" or "Long-Term" initiative. This range of options provides various ways for clinics to start on built environment initiatives and provides stepping stones for success and increased capacity to improve health.

Capacity Building

Capacity Step	Low Barrier	Next Steps	Long-Term Opportunity
Time Scale	Quick Win-Start Soon	Months-Years	Many Years
Cost	Low-Medium	Medium	High
Partnerships	0-1	2-3	Many
Scale of Impact	Individual/Clinic Visitor	Individual/Clinic Visitors-Community	Widespread Community

Table 3: As clinics build capacity through partnerships and fundraising, they can advance from "low barrier" options to long-term opportunities.

Toolkit Structure

This Toolkit is separated into nine social determinants of health (Food, Safety, Home, Community, Transportation, Nature, Air + Soil, Water, and Heat). Each section begins with an introduction to the topic and is accompanied by four to six tool ideas for improving health. See below for an example on how to interpret each tool.

Each tool has **Three Points of Entry** at which it can be implemented based on clinic capacity. The capacity building table on the left-hand page explains each in further detail.

Title of the tool

The **Introduction** provides background on the health issue that the tool addresses and a short description of the tool.

Example Tool

FOOD RX

Chronic illness often goes hand-in-hand with poor nutrition, and when people cannot afford food, or have to forgo paying other bills to buy food, it is hard to eat healthfully.

Clinics can start to address correlations between food insecurity, poor nutrition, and poor health by offering Food Prescriptions (Food Rx) programs that offer healthy produce, staple items, nutritious snacks, and recipes to clinic patients in need. Food and educational materials can be distributed at the clinic itself, a food bank, a church, or local grocery stores.

1: NUTRITIONAL INFORMATION | PR

Low Barrier

Clinics provide nutritional information, recipes, and healthy snacks (apples, bananas, etc.) to clinic visitors who receive Food Rx.

2: FOOD RETAILERS | PR

Next Steps

Clinics establish Food Rx markets at clinics and provide cooking demos on-site.

3: BUS ROUTE ADVOCACY | PA

Long-Term

Clinics create partnerships with local grocery stores and farmers' markets who will accept FoodRx card credits for fresh foods and vegetables.

TOPIC CROSS-OVERS

Transportation

Topic Cross-Overs shows what other SDOH relate to this tool.

POTENTIAL PARTNERS
- Food Banks
- Church Food Pantries

FURTHER RESOURCES
- Houston FoodBank
- Greater Cleveland Food Bank
- Feeding America

Further Resources provides names of nonprofits, government agencies, or other institutions that can be searched for online to find resources.

CASE STUDY

Healthcare partners, including clinics and hospitals in Houston, have partnered with Houston Food Bank to provide thirty pounds of free produce and four additional healthy items to patients who receive a Food Rx at participating healthcare providers. Patients can use their FoodRx twice a month at Food For Change Markets to select food items from a broad range of options. The markets also provide cooking demonstrations and nutritional information.

Each Point of Entry falls into one of **Three Categories**:

(PR) = Program Recommendation
(PO) = Project
(PA) = Policy Advocacy

Potential Partners provides ideas of local organizations that may be valuable partners on initiating this effort.

The **Case Study** provides an example of how this tool can be applied.

5

THE HEALTHY PLACES TOOLKIT

FOOD

GOAL: Easy access to healthy, nutritious, and affordable food for all.

Poor nutrition and food insecurity leads to chronic health problems, including obesity and diabetes. While diets that lead to poor health are multidimensional, availability and accessibility of healthy foods are two of the main challenges for many families, particularly those living in rural areas and in communities of color. The USDA has found that 25-30 million Americans, or about 9 percent of the total population, are living in communities that do not have adequate access to supermarkets or grocery stores within a reasonable distance from their home.[7]

HEALTH IMPACT

- Limited access to healthy foods is associated with obesity and overweight, affecting two-thirds of adults and one-third of children ages 6 to 19.[8]
- A study of nearly 600 rural seniors found that increased distance to the nearest supermarket or other healthy food retail outlet is associated with decreased daily consumption of fruits and vegetables.[9]

URBAN CONTEXT

Families in urban locations are less likely to own cars and may struggle to access healthy food retailers if there is not adequate public transportation.

NON-URBAN CONTEXT

Ten miles is typically considered an acceptable distance from a healthy food retailer, such as a grocery store, supermarket, or other retail food outlet. However, it is not uncommon for the closest grocery store to be much farther away. Low income and rural communities typically have the farthest distance to travel to access healthy food.[10] In Central Texas, rural residents must travel greater distances than urban residents to supermarkets and supercenters, which reduces their access to fruit and vegetable retail outlets and is associated with lower consumption of those foods.[11]
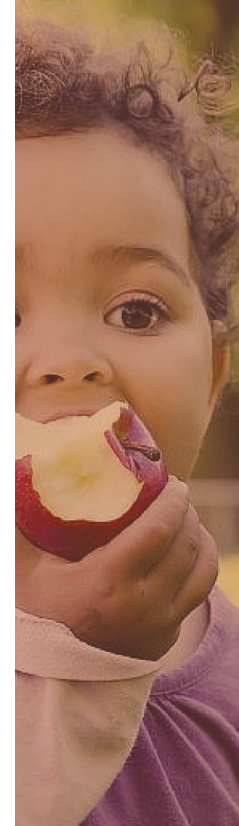
COMMUNITY GARDENS

Common barriers to fruit and vegetable intake include cost and availability of fresh produce.

Personal and community gardens have the potential to decrease these barriers. While the backyards of homeowners may provide a space for personal vegetable gardening, community gardens provide shared spaces for renters to grow their own food. Households who participate in community garden programs are **1.5 times more likely to consume fresh fruits and vegetables throughout the day***, but this is not the only benefit community gardens provide.[12] They are a place to meet with neighbors, they beautify vacant lots, and they provide stress relief for participants. Community gardens can be designed to be accessible for all gardeners by installing raised beds lifted from the ground high enough that a chair or wheelchair can be placed near the bed.*

1: GARDENING KITS | P0

Low Barrier

Clinics provide soil, seeds, and raised bed materials to families they serve. Clinics should research the community groups they serve for cultural food preferences to ensure they are providing seeds for plants that align with community preferences.

2: CLINIC GARDENS | P0

Next Steps

Clinics can sponsor community garden plots at clinic locations or at nearby churches, vacant lots, or schools for families living in rental units without access to land for personal gardens.

3: OFF-SITE GARDENS | P0

Long-Term

Clinics create partnerships with local urban agriculture organizations or nonprofits to build community gardens off-site.

TOPIC CROSS-OVERS

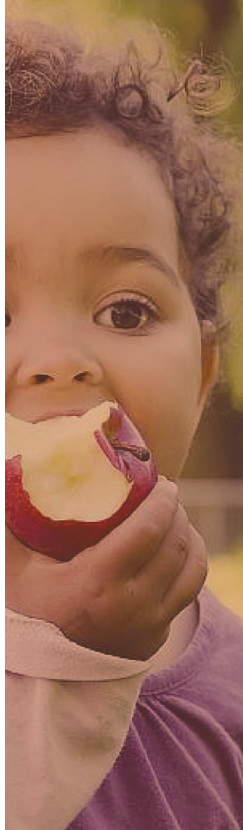- Community
- Nature

POTENTIAL PARTNERS

- Community Garden Organizations
- Municipalities
- Food Security Organizations

FURTHER RESOURCES

- Sustainable Food Center
- Texas Master Gardener Programs

CASE STUDY

El Centro de Corazon seeks to increase access to healthy foods and address food insecurity via its GREEN Garden Collaborative. El Centro currently has community garden spaces at their locations which serve to educate patients about healthy eating and growing food. Additionally, they provide support to 13 other schools/community gardens in the greater East End neighborhood via education and access to resources. To learn more about the GREEN Garden Collaborative please visit ElCentroDeCorazon.org/GREEN.

FOOD RX

Chronic illness often goes hand-in-hand with poor nutrition, and when people cannot afford food, or have to forgo paying other bills to buy food, it is hard to eat healthfully.

Clinics can start to address correlations between food insecurity, poor nutrition, and poor health by offering Food Prescriptions (Food Rx) programs *that offer healthy produce, staple items, nutritious snacks, and recipes to clinic patients in need. Food and educational materials can be distributed at the clinic itself, a food bank, a church, or local grocery stores.*

1: NUTRITIONAL INFORMATION | PR

Low Barrier

Clinics provide nutritional information, recipes, and healthy snacks (apples, bananas, etc.) to clinic visitors who receive Food Rx.

2: FOOD RETAILERS | PR

Next Steps

Clinics establish Food Rx markets at clinics and provide cooking demos on-site.

3: BUS ROUTE ADVOCACY | PA

Long-Term

Clinics create partnerships with local grocery stores and farmers' markets who will accept FoodRx card credits for fresh foods and vegetables.

TOPIC CROSS-OVERS

🚲 Transportation

POTENTIAL PARTNERS

- Food Banks
- Church Food Pantries

FURTHER RESOURCES

- Houston FoodBank
- Greater Cleveland Food Bank
- Feeding America

CASE STUDY

Healthcare partners, including clinics and hospitals in Houston, have partnered with Houston Food Bank to provide thirty pounds of free produce and four additional healthy items to patients who receive a Food Rx at participating healthcare providers. Patients can use their FoodRx twice a month at Food For Change Markets to select food items from a broad range of options. The markets also provide cooking demonstrations and nutritional information.

Image: Houston Press
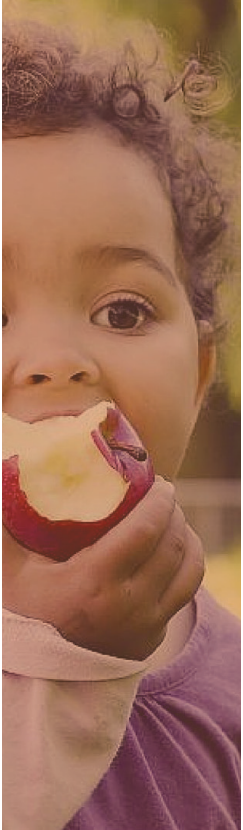
FARMERS' MARKETS

Healthy food retailers selling fresh produce and healthy staples are often few and far between in very urban or very rural communities.

Farmers' markets, and especially mobile pop-up farm stands, can help fill neighborhood gaps in healthy food grocery shopping options. Clinics can support this healthy food retail option by hosting mobile farm stands and farmers' markets on clinic properties or sponsored by clinics at other locations. In addition to supporting farm stands, clinics can advocate for programs and policies that make fresh produce from farmers' markets more affordable. *Many cities have programs where farmers' market shoppers can use EBT or SNAP to pay for produce, and the value of their dollar is doubled (i.e., one EBT dollar has a value of two dollars at the farmers' market).*

1: HEALTH SCREENINGS | PR

Low Barrier

Clinics can provide health screenings at local farmers' markets. Free health screenings may encourage community members to visit the farmers' market.

2: MOBILE FARMERS' MARKETS | PR

Next Steps

Clinics can host a mobile farmers' market in their parking lot, so patients and neighbors can shop for healthy foods at reduced prices on-site.

3: HEALTHY FOOD FINANCING | PR

Long-Term

Invest in community healthy food retailers through Healthy Food Financing Initiatives. This is an investment of capital into a food enterprise project to address higher costs and initial barriers to entry in underserved areas.

TOPIC CROSS-OVERS

👥 Community

POTENTIAL PARTNERS

- Municipalities
- Grocery Stores
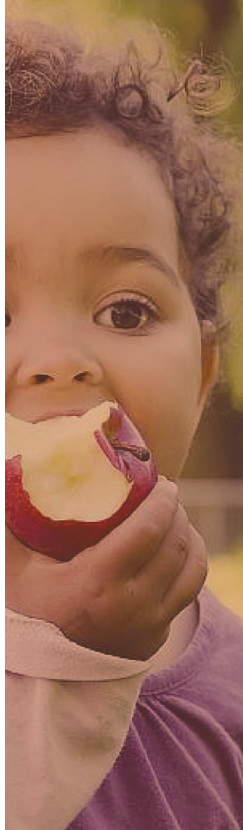- Churches
- Local Farms

FURTHER RESOURCES

- Farmers' Market Coalition
- The Food Trust
- The Reinvestment Fund

CASE STUDY

Farmshare Austin's Fresh For Less Mobile Markets Program sells locally-grown produce, eggs, honey, and other pantry staples at reduced prices in high-need areas three times a week. The markets set up at sites such as healthcare clinics, apartment complexes, churches, and schools across the city.

Image: Farmshare Austin

SAFE ROUTES TO MARKETS

In many neighborhoods, families without cars rely on walking, biking, or public transportation to shop for groceries.

Nearby stores may not sell fresh produce or other healthy options, so shoppers may need to travel farther to reach healthy food retailers. These retailers may be difficult to get to if they aren't served by public transportation, or if road conditions are unsafe for biking or walking. Healthcare clinics can work with transit agencies to improve bus access to healthy food outlets and to identify other opportunities for transit to support healthy food access, such as co-locating farmers' markets at transit hubs or leasing unused property for use as a community garden.

1: BIKE TRIPS | PR

Low Barrier

Clinics can organize group biking trips from neighborhoods to the farmers' market. Many bikers are fearful of biking alone, so this outing could provide safety in numbers.

2: BIKE MAINTENANCE RESOURCES | PO

Next Steps

Clinics sponsor bike racks, bike pumps, and other bike maintenance tools at grocery stores to provide easy and reliable bike maintenance.

3: BUS ROUTE ADVOCACY | PA

Long-Term

Advocate for bus routes that stop at farmers' markets and healthy food retailers as well as bike lanes that connect neighborhoods to healthy food retailers and farmers' markets.

TOPIC CROSS-OVERS

- Transportation
- Safety

POTENTIAL PARTNERS

- Farmers' Markets
- Grocery Stores
- Transit Authorities
- Municipalities

FURTHER RESOURCES

- Safe Routes to School National Partnership
- The Food Trust
- The Street Trust
- Bike Texas

CASE STUDY

In Knox County, Illinois, many residents lacked transportation to the Mt. Vernon Farmers' Market, one of the few healthy food options in the county. The Farmers' Market worked with the Knox Area Transit to provide transportation to and from the market to increase access.

Image: Safe Routes Partnership

SAFETY

GOAL: Safe neighborhoods through re-investment in communities and social networks.

Crime and violence in neighborhoods are public health issues that affect both the physical and mental well-being of individuals. There are four levels of exposure to crime and violence that can affect health and well-being: becoming the victim of a crime; witnessing a crime; hearing about community crime and violence; and seeing the effects of crime that damage property and degrade the quality of the built environment. There is a correlation between crime hot spots, which experience high crime intensity, and poor health. However, this may also be due to concentrated disadvantage, which ties into recognizing that communities with high levels of crime also correlate with many other social injustices, such as lack of social services, poverty, and lack of public investment.

HEALTH IMPACT

- People who fear crime in their communities may engage in less physical activity in their neighborhood. One study found that people who perceive their environment to be unsafe have higher BMI and levels of obesity [13]
- Violent crimes may cause non-fatal injuries which can cause mental distress, reduce quality of life, and even lead to premature death if the effects are long term.[14]
- Crime and violence can even affect perceptions of health. For example, residents in a crime hot spots reported they seem to get sick more than other people, compared to residents in crime cold spots. They also reported feeling worn out more than residents in cold spots.[15]

URBAN CONTEXT

While some studies show that there is more crime in urban areas compared to rural areas, this is likely due to a greater density of population.[16]

NON-URBAN CONTEXT

Crime hot spots are less likely to occur in non-urban environments. While rural crime exists, it is an understudied issue. However, it is likely that any level of exposure to crime in both urban and non-urban communities may have similar outcomes, and regardless of urban or non-urban settings, low-income neighborhoods are more likely to have higher crime rates than higher-income communities.[17]

COMMUNITY MEDIATION

In communities that experience a lot of violence, care should be taken to assess underlying public health issues that cause harm to high-risk individuals.

Healthcare clinics can intervene in this, and similar public health crises, by __convening and helping to train groups of community members__ who act as direct mediators in intra-communal conflicts. These mediation groups can also identify and treat high-risk individuals by assessing what resources and support they need in day-to-day life. Serving the specific needs of these community members will help to change community norms. In large part, this looks like __pre-emptively providing mediation services__ and providing community resources to underserved communities.

1: AFTER-SCHOOL ACTIVITIES | PR

Low Barrier
Partner with schools to provide after-school activities that are targeted towards vulnerable young people.

2: MEDIATION TRAINING | PR

Next Steps
Start a mediation training program to help community members prepare to mediate community conflicts.

3: RESEARCH | PR

Long-Term
Engage in long-term research around issues that tend to crop up in the community and determine what supportive services need to be offered alongside mediation to alleviate the stressors that cause conflicts.

TOPIC CROSS-OVERS

Community

POTENTIAL PARTNERS

- Churches
- Social Workers
- Trained Mediators

FURTHER RESOURCES

- National Association for Community Mediation
- New York Peace Institute

CASE STUDY

Cure Violence (Cease Fire) began in Chicago through a collaboration with a local doctor and community members. They operate their program with the understanding that community violence is a symptom of a lack of resources in a stressed neighborhood. By treating this as a diagnosable public health issue, they are able to train mediators to directly intervene in conflicts.

Image: Cure Violence

THREE PILLARS

Clinics can help to join, develop, or convene a wraparound services program for under-served youth in rural communities by engaging community centers in providing after-school activities and transportation through a "three pillars" model.

The first pillar, collective impact, involves bringing local stakeholders to the table and sharing responsibility in uplifting young people. The second pillar, cultural research, involves interviewing local community members to ensure that all suggested interventions are locally informed. The third pillar, bright spots, focuses on particularly isolated areas and communities to ensure that there are resources offered to young people there <u>Clinics can become a part of these partnerships, and refer youth and teenage patients</u> to these programs.

1: AFTER-SCHOOL ACTIVITIES | PR

Low Barrier
Refer young, at-risk patients to local, pre-established youth engagement organizations that will be able to provide them with resources.

2: MEDIATION TRAINING | PR

Next Steps
Treat safety as a public health issue. Organize stakeholder meeting groups of community organizations, teachers, police, etc., to discuss what other supportive services need to be offered to serve the community.

3: RESEARCH | PR

Long-Term
Determine a strategy for buying, renting, or programming abandoned spaces that operate as hot spots for unsafe activities.

TOPIC CROSS-OVERS

Community

POTENTIAL PARTNERS

- Churches
- After-School Programs
- Schools
- Police Departments

FURTHER RESOURCES

- Texas Organizing Project
- Local Initiatives Support Corporation

CASE STUDY

Berea BCJI was created through a partnership with Local Initiative Support Corporation and the Bureau of Justice Assistance to serve three rural Southeastern Kentucky counties. The initiative was meant to interrupt the growing crime rate in areas that have suffered from high usage and a lack of resource concentration. By treating this as a public health issue, they were able to bring in stakeholders and a variety of resources to establish a joint effort for better serving the community and intervening in dangerous behaviors.

CLEAN-UP DAYS

Neighborhoods with litter, derelict buildings, and other forms of physical disorder tend to have higher rates of crime.

Community clean-ups reduce crime in a two-fold way by improving the appearance of a neighborhood and promoting community cohesion and bonding. <u>**Clinics can provide resources for community groups who wish to organize clean-ups i**</u>*n the community. These resources should be tangible supplies like trash bags, gloves, etc., and should be available to any community group that wishes to organize a clean-up. Providing easily accessible materials will help community members feel more of a sense of ownership and pride within their communities.*

1: PROVIDE MATERIALS | PR

Low Barrier
Purchase and provide materials for volunteer groups that want to clean up a block or a lot, financially support an organization already hosting clean-ups, or help advertise clean-ups.

2: CLEAN UPS | PR

Next Steps
Find lots and streets where there tends to be a lot of dumping or littering, and then organize community-wide clean up and beautification days on a regular basis.

3: APP DEVELOPMENT | PR

Long-Term
Develop a 311 app where community members can report streets, corners, or lots that need maintenance and organize clean-ups in those spaces.

TOPIC CROSS-OVERS

Community

POTENTIAL PARTNERS

- Environmental Agencies

FURTHER RESOURCES

- Keep America Beautiful

CASE STUDY

Keep Austin Beautiful has provided resources for community clean-ups since 1985. Community groups schedule clean-ups two weeks in advance and then pick up supplies from Keep Austin Beautiful to clean up specific street corridors.

Image: Keep Austin Beautiful

HOMELESSNESS SUPPORT

Homelessness, whether short- or long-term, can shave years off a person's life expectancy.

Those who sleep unsheltered can be exposed to physical violence, contagious diseases, stress, and unsafe living conditions. Contagious diseases such as typhus, shigella, or hepatitis A can put the general public at risk of contraction. Clinics can help intervene in these groups by donating basic sanitation supplies and introducing healthcare evaluations and treatments to fight diseases.

1: SANITATION SUPPLIES | PR

Low Barrier

Donate sanitation supples and participate in volunteer days to improve conditions in homeless encampments.

2: STREET HEALTHCARE | PR

Next Steps

Provide health evaluations through street outreach and in homeless shelters. Train staff on evaluating for substance abuse and mental illness, and provide referrals to services.

3: HEALTHCARE TREATMENT | PR

Long-Term

Partner with homeless organizations and shelters to fund healthcare treatment for health issues such as infectious disease, substance abuse, and mental illness.

TOPIC CROSS-OVERS

Community

POTENTIAL PARTNERS

- Churches
- Homeless Shelters

FURTHER RESOURCES

- National Healthcare for the Homeless Council
- Association of Clinicians for the Underserved
- National Resource Center on Homeless & Mental Illness
- Children's Health Fund

CASE STUDY

Austin's Watershed Protection Department and the Ending Community Homelessness Coalition (ECHO) are working together to improve conditions in homeless camps by bringing basic sanitation supplies, building relationships, and providing health evaluations.

Image: Ending Community Homelessness Coalition (ECHO)

REDUCE HARASSMENT

Sexual harassment on the street is a stressor that has a huge impact on the perceived safety and mental health of the victim.

Harassment is associated with increased anxiety and depression in both women and men. The consequences of street sexual harassment can also affect physical health. When people do not feel safe walking down the street or waiting for the bus or train, they are less likely to be active or use public transportation. Clinics can take measures to reduce street harassment by establishing partnerships to launch media campaigns about reducing harassment.

1: REFERRALS | PR

Low Barrier

Ask patients if they have been a victim of sexual harassment and refer patients who have been victims to mental healthcare providers.

2: TRAINING | PR, PA

Next Steps

Train community members on how to speak up when they witness sexual harassment and report it to police or other community advocates. Advocate for policies that criminalize street harassment.

3: MEDIA CAMPAIGNS | PR

Long-Term

Partner with transit organizations and advocacy groups to launch a communications campaign on how to report sexual harassment.

TOPIC CROSS-OVERS

Community

Transportation

POTENTIAL PARTNERS

- Municipalities
- Transit Organizations
- Advocacy Groups

FURTHER RESOURCES

- Stop Street Harassment

CASE STUDY

The Washington Metropolitan Area Transit Authority in Washington, DC and local advocacy groups partnered to raise awareness about sexual harassment. They posted large-format posters in buses and on trains with numbers to text and call to report incidents of sexual harassment.

Image: Washington Metropolitan Area Transit Authority

HOME

Goal: Safe and healthy homes for all renters and homeowners.

Low-quality housing has a significant impact on the health of its residents. It is estimated that we spend 69 percent of our time at home, and prolonged exposure to environmental toxins or unsafe temperature conditions within homes can cause a host of health problems. Aspects of housing quality include safety of the physical spaces, space for each individual living in the home, and the absence of unsafe substances, such as mold, asbestos, or lead. Home design, material quality, age, and maintenance affect housing quality. Housing quality deterioration in neighborhoods can also negatively affect mental health.[18]

HEALTH IMPACT

- Poor indoor air quality contributes to cancers, cardiovascular disease, asthma, and other illnesses. [19]
- Cold and damp interiors and pest infestation can aggravate respiratory diseases and asthma.[20]
- A lack of air conditioning can lead to heat-related illnesses. Having an air conditioner can decrease the risk of heat-related mortality during hot summers and heat waves [21]
- Low-quality housing often is poorly insulated and causes heating bills to be high. Low-income households often have to decide between paying bills and purchasing food.

URBAN CONTEXT

Issues like proper ventilation can have major impacts on human health. Children in public housing have a higher prevalence of asthma than children in other housing types.[22]

NON-URBAN CONTEXT

Residents in rural areas face basic plumbing, water, and heating issues in addition to other housing quality issues, like mold, experienced in urban environments. Rental housing regulations might not exist for small populations in certain states, which reduces the ability of residents to advocate for better overall housing quality.[23]

CO-LOCATE SERVICES

Mobility plays a large role in the ability of community members to access the resources they need to support their everyday health.

This includes access to healthcare for checkups and screenings as needed. Populations that rely on public transportation as their primary means of mobility face barriers that those who have a car do not. Co-location of dental, medical, and mental health services within or immediately adjacent to apartment complexes enables residents to be able to easily access the healthcare they need. Offering, several services in the same building and adjacent to housing may also reduce stigma for accessing mental healthcare services. Co-location of services may also expand to job training services, child welfare and family services, domestic violence services, and addiction recovery programs.

1: MEET AND GREETS | PR

Low Barrier

Clinics can host meet and greets at senior centers, community centers, or apartment complexes within their neighborhood to provide information about their services and other resources community members might utilize.

2: HEALTH SCREENINGS | PR

Next Steps

Clinics can begin quarterly or periodic health screenings at public housing or set up small pop-ups in low income communities.

3: CLINIC CO-LOCATION | PO

Long-Term

Clinics can set up a satellite location or relocate entirely inside of low-income apartments or senior housing complexes.

TOPIC CROSS-OVERS

Transportation

POTENTIAL PARTNERS

- Developers
- Community Organizations Focused on Affordable Housing
- Local Housing Authorities

FURTHER RESOURCES

- Healthy Futures Fund
- Local Initiatives Support Corporation
- Rural Health Information Hub

CASE STUDY

Rolling Hills Apartments is a development complex that provides affordable housing in Saint Paul, Minnesota, to refugees and immigrants. Clinic exam rooms, refugee services, job placement services, and youth job training are also co-located within the complex.
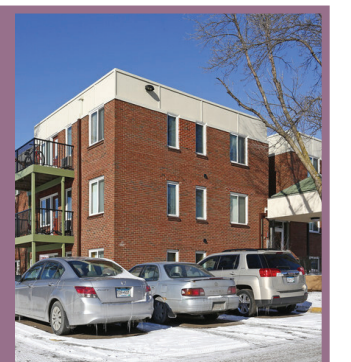
Image: Apartments.com

HEALTHY HOME CHECKLIST

*A healthy home is dry, well-ventilated, free of contaminants and pests, hazard-free, and thermally controlled.*

It takes regular maintenance and upkeep to prevent illness, reduce allergens, and ensure the home is soundly constructed and thermally efficient. **A Healthy Home Checklist can help homeowners gain understanding of how to maintain their home to avoid illness** *and injury. Clinics can provide a checklist to patients focusing on how their housing can impact their health and how they can take simple steps to maintain a healthy home. A similar checklist can be made for apartment renters alongside information on local renter's rights and how they can address issues with their landlords or city government.*

1: HEALTHY HOME CHECKLIST | P0

Low Barrier

Walk through a Healthy Home Checklist with patients, especially those suffering from asthma.
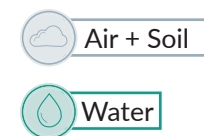
2: HOST WORKSHOPS | P0

Next Steps

Clinics can host workshops in low-income neighborhoods on how to use the Healthy Home Checklist and steps homeowners can take to improve housing quality. These workshops may partner with local hardware stores.

3: HOUSING POLICIES | PA

Long-Term

Partner with legal clinics and health departments to pass policies aimed at improving housing quality and strengthening renter's rights to healthy housing. Provide resources on state or federal financial assistance for home improvement to clinic visitors.

TOPIC CROSS-OVERS

- Air + Soil
- Water

POTENTIAL PARTNERS

- Apartment Complexes
- Local Hardware Stores
- Local Housing Authorities
- USDA Rural Development Office

FURTHER RESOURCES

- National Center for Healthy Housing
- CDC Healthy Housing Inspection Manual
- Environmental Watch Healthy Homes
- Healthy Homes Coalition

CASE STUDY

The nonprofit Green and Healthy Homes Initiative provides information and resources on how to maintain a clean, green, safe, and healthy home environment. They provide online quizzes homeowners can take to determine if their family is at risk of lead poisoning as well as actionable steps to address the environmental factors impacting their health. They also provide direct services to homeowners, including home assessments, trainings, resident education, family advocacy, and legal services.

PROACTIVE INSPECTIONS

Rental housing is more likely to be substandard quality than owner-occupied housing, putting renters at higher than average risk for health problems such as lead poisoning and asthma.

Most municipalities maintain a complaint-based system to address substandard housing, conducting housing inspections and beginning safety code enforcement proceedings if the complaint is verified. The proactive rental inspection (PRI) process differs in that the rental units are inspected periodically to ensure the safety and health of the occupants. Clinic staff can collaborate with apartment complex building managers and nonprofits to inspect, mitigate, and maintain adequate health standards within a complex before they escalate.

1: WORKSHOPS | PR

Low Barrier

Clinics host workshops on common health and safety issues and set up a reporting system/discuss an existing reporting system within an apartment complex.

2: PARTNER WITH APARTMENTS | PR

Next Steps

Clinics partner with apartment complexes to do building assessments and collect resident feedback. Apartment complexes could open a feedback page for a limited time on their website.

3: INSPECTIONS | PR

Long-Term

Clinics and building managers create a system that allows for routine inspections of building quality and for residents to indicate if they have an issue in their unit.

TOPIC CROSS-OVERS

- Air + Soil

POTENTIAL PARTNERS

- Local Health Departments
- Municipalities
- Nonprofits Focused on Tenants' Rights

FURTHER RESOURCES

- National Center for Healthy Housing
- CDC Healthy Housing Inspection Manual
- Environmental Watch Healthy Homes

CASE STUDY

Nan McKay Residential Rental Inspection Program has three major steps that consist of ordinance adoption, program design, and program implementation. These steps ensure that city ordinances are reviewed, an inspection protocol is established, a web-based program management portal is designed, and community transparency is preserved.

SUPPORTIVE HOUSING

Supportive housing structures enable community members who experience or are at risk of chronic homelessness and housing instability to have access to stable housing.

Those who have just been released from prison or hospitals are at a high risk of experiencing homelessness. Populations experiencing housing instability also have trouble gaining access to other healthcare resources, such as appointments at healthcare clinics. **Supportive housing structures aim to pair affordable housing with services** *in order to help community members maintain housing stability.*

1: OUTREACH | PR

Low Barrier

Clinics can work with church groups and other nonprofits to outreach to those experiencing homelessness and provide health screenings and housing resources.

2: PROVIDE TRANSIT | PR

Next Steps

Clinics can partner with shelters and other existing supportive housing to provide transportation to and from supportive housing to clinics.

3: SATELLITE CLINICS | PR

Long-Term

Clinics can co-locate satellite clinics within supportive housing (similar to co-location of services tool)

TOPIC CROSS-OVERS

Safety

POTENTIAL PARTNERS

- Developers
- Nonprofits Focused on Affordable Housing
- Nonprofits Focused on Homelessness

FURTHER RESOURCES

- Corporation for Supportive Housing
- Colorado Coalition for the Homeless

CASE STUDY

The Colorado Coalition for the Homeless provides care to the 20,000 individuals and families they serve annually. Their mission is to remove the barriers to adequate housing and healthcare. In 2014, they opened the Stout Street Health Center and Renaissance Stout Street Lofts, which is a 53,192 square-foot development that serves those who are homeless or at risk of being homeless regardless of ability to pay or immigration status.

COMMUNITY

Goal: Strengthened relationships and social support in neighborhoods.

Community and personal relationships are important for physical health and well-being. Social isolation correlates with increased mortality risk and impacts mental health because of a lack of support for both emotional stressors and life's logistics (i.e., a ride to the doctor's office) is detrimental to personal health. On a community level, when neighbors work together to affect change in their communities, it not only leads to improvements in that community, it can lead to actual improved health for the residents.

HEALTH IMPACT

- Social capital and collective efficacy refers to how groups deal with shared resources and how groups can work together to create change. High levels of collective efficacy is associated with better self-rated health, lower rates of neighborhood violence, and better access to healthcare, healthy foods, and parks.[24]
- Social networks affect health because people tend to become more or less healthy to match the behaviors of friends and family.[25]
- High levels of social support positively influence health outcomes through behavioral and psychological pathways. For example, social support may help people stick to healthier diets and reduce stress.[26]

URBAN CONTEXT

Families that have low income often have limited social networks. Finding long-term funding for social programming and events for low-income communities can become a barrier to building these networks.[27] Since urban areas can be diverse and culturally rich spaces, programming and events need to reflect this reality.

NON-URBAN CONTEXT

Lack of funding for programming and low housing density can impact social capital in rural environments. The elderly and populations with limited mobility are more likely to be subject to isolation in rural areas.[28]
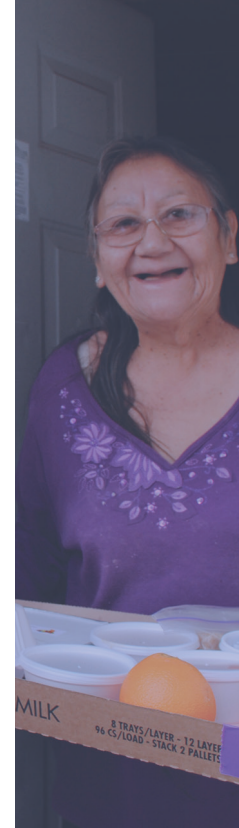
COMMUNITY EVENTS

Community events are an important opportunity for community members to get to know each other and create supportive social connections.

*These events can range from purely social, such as bingo nights and festivals, to opportunities for **community re-investment**, such as volunteer days. Many events can be paired with free or low-cost health screenings. Clinics can also **rent unused spaces** for a low cost to allow community members to host meetings and their own events.*

1: EXISTING EVENTS | PO

Low Barrier
Clinics can identify existing community events and provide health screenings or health information services.

2: RENT SPACES | PO

Next Steps
Clinics can allow community members to use any additional spaces they have in order to host their own events.

3: ANNUAL EVENTS | PO

Long-Term
Clinics can partner with local non-profits and host a big annual event. This is a great tool to pair with outdoor placemaking events.

TOPIC CROSS-OVERS

Nature

POTENTIAL PARTNERS

- Corporate Sponsors
- Churches
- Schools
- Parks and Recreation Departments

FURTHER RESOURCES

- Health Center Week
- Central Health

CASE STUDY

The Central Health Southeast Health & Wellness Center serves insured and uninsured populations in Travis County, Texas. They offer community resources that include exercise rooms, meeting rooms, and educational facilities.
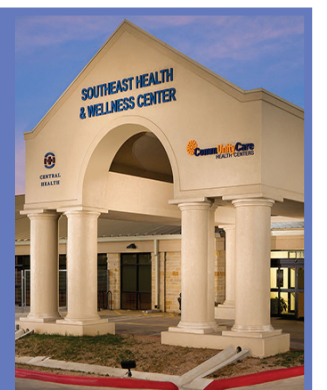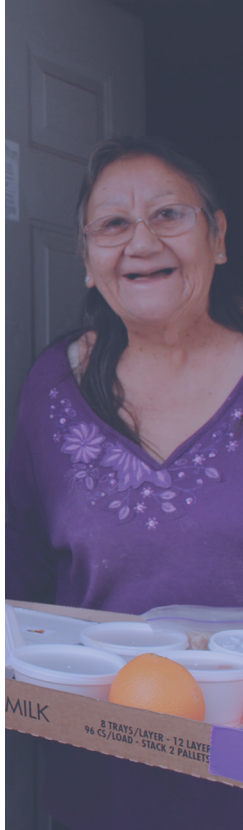
Image: Central Health

PLACEMAKING

Placemaking inspires residents to reinvent the public outdoor spaces they encounter on a daily basis as places of wonder, delight, and respite.

Placemaking is a collaborative process between local residents, artists, designers, and cities to improve the public realm for public good. Examples can include street art, murals, parklets, community-built benches and tables, and gardens in vacant lots. The co-creation of these works are opportunities to build social cohesion. Clinics can partner with nonprofits and their municipalities to **bring local artists and community members together to create placemaking** *that provides residents with a sense of place, a place to recreate, and connection to the identity of their surrounding community.*

1: PUBLIC ART | PO

Low Barrier

Clinics can temporarily activate the space outside their clinic by painting a mural on the side of the clinic building or inviting community members to temporarily decorate sidewalks with chalk.

2: CLINIC PLACEMAKING | PO

Next Steps

Clinics can partner with a local non-profit to commission an artist for a placemaking project at the clinic that includes more permanent elements, and host a community build day to complete the project.

3: COMMUNITY PROJECT | PO

Long-Term

Clinics can partner with local non-profits or a university to have a series of placemaking projects throughout the community. These projects can focus on community health, connection, and well-being.

TOPIC CROSS-OVERS

🌿 Nature

POTENTIAL PARTNERS

- Placemaking Non-Profits
- Local and Federal Arts Commissions
- Economic Development Corporations
- Local Artists

FURTHER RESOURCES

- Project for Public Spaces
- Philadelphia Mural Arts
- Vail Health Arts in Healing

CASE STUDY

This Mural Arts Program operates in low-income neighborhoods across Philadelphia and brings together grassroots organizations and community members to decide on the placemaking enhancements they'd like to see in their neighborhoods. The aims of this program include reflecting and depicting community culture, developing long-term community collaborations, educating youth about art, and creating opportunities for artists.
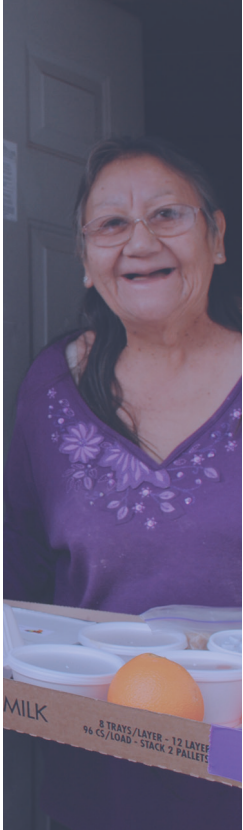
ECONOMIC DEVELOPMENT

Community-building should extend beyond person-to-person relationship development and apply to local businesses and institutions.

Clinics operating in economically disadvantaged communities can **stimulate economic growth and local wealth-building** *by choosing to work with local businesses and prioritizing minority, women and locally-owned vendors and contractors. Clinics can set benchmarking goals over time to achieve a certain percentage of their business to be given to these types of businesses. Eventually, this ethos may be integrated into* **formalized clinic vendor, contractor, and supplier policies**. *Choosing to support local businesses builds community trust and creates an entrepreneurial ecosystem within the community.*

1: INTERNAL AUDIT | PR

Low Barrier

Perform an internal audit of current vendors, suppliers, and contractors. Evaluate the percentage of those who are locally, minority, women, LGBTQ+, or veteran-owned.

2: LIST POTENTIAL SUPPLIERS | PR

Next Steps

Create a list of locally-owned suppliers and schedule meetings to learn about their products and services. Create a list of suppliers for common purchases and contracts as a resources for future use.

3: ESTABLISH POLICY | PR

Long-Term

Establish a supplier, vendor, and contractor policy with target metrics. Metrics should include target percentages for locally-owned businesses as well as businesses owned by marginalized groups.

TOPIC CROSS-OVERS

🍎 Food

POTENTIAL PARTNERS

- Chamber of Commerce
- Economic Development Corporation
- Nonprofits
- Universities

FURTHER RESOURCES

- American Hospital Association Supplier Diversity
- Better Health Together
- USDA Rural Communities Development Initiative Grant

CASE STUDY

The Mayo Clinic in Rochester, Minnesota, seeks to work with diverse suppliers, including small, minority, LGBTQ+, women, and veteran-owned businesses for goods and services at the clinic. They provide an online registration system for vendors to list their services and qualifications.

Image: Mayo Clinic
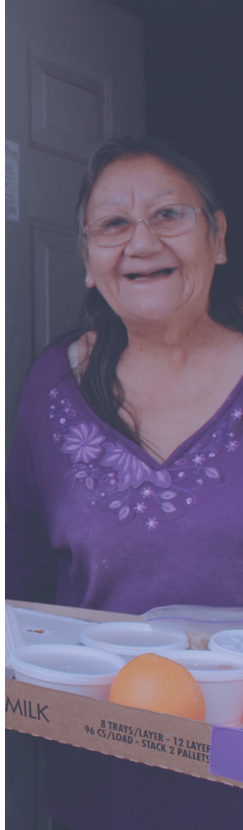
CONNECT ISOLATED GROUPS

Social isolation can be very damaging to physical and mental health. Isolated groups, such as the elderly, new mothers, and those who have experienced domestic violence, are especially at-risk.

Others may feel isolated due to their gender identity, race, ethnicity, or sexual orientation. Social connection to those who share similar life experiences, or those simply willing to lend a hand, can create social networks where **community members can support one another's health** *by providing rides to appointments, translation services, and meals to one another. Clinics can help to connect isolated groups so they can support one another.*

1: INFORMATION | PR

Low Barrier

Clinics can hand out information to patients with local resources for new mothers, the elderly, and recent immigrants.

2: HOST EVENTS | PR

Next Steps

Clinics can host events for specific groups, such as new mothers, recent immigrants, or the elderly.

3: COMMUNITY KITS | PR

Long-Term

Partner with a nonprofit or university health department to create kits for community members in these isolated populations. An example would be a small new mother's kit or resources for new immigrant populations.

TOPIC CROSS-OVERS

Safety

Food

POTENTIAL PARTNERS

- Nonprofits Focused on Mental Health
- Senior Centers
- Universities
- Churches

FURTHER RESOURCES

- Campaign to End Loneliness
- Connect2affect.org
- Caring for Reno's Elders

CASE STUDY

Caring for Reno's Elders (C.A.R.E.) is focused on increasing social connectedness through building networks for elderly populations. This program connects community members to resources, employs volunteers, shares information, and increases awareness of the health of the elderly.
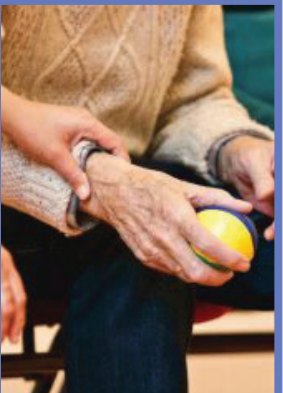
Image: BUILD Health Challenge

TRANSPORTATION

Goal: Safe streets for people to walk, bike, and ride transit.

People are more active when they live in neighborhoods that have sidewalks, bicycle lanes, and safe streets. However, many neighborhoods are missing this infrastructure. This is important because despite the many benefits of physical activity, only one-half of all U.S. adults and about one-quarter of high school students meet the current guidelines for aerobic physical activity.[29] Recognizing the connection between health and transportation can help address adult inactivity. In addition to the active living opportunities sidewalks, bike lanes, and trails provide, safe streets reduce the incidence of automobile crashes with pedestrian or bicyclist injuries.

HEALTH IMPACT

- People who live in neighborhoods with sidewalks on most streets are 47% more likely to be active for at least 30 minutes a day.[30]
- Regular physical activity is associated with important health benefits, including the reduced risk for premature death, cardiovascular disease, type 2 diabetes, some cancers, and depression.[31]
- Medians, speed bumps, and other traffic-calming installations can reduce the number of automobile crashes with injuries to pedestrians by up to 15%.
- Those who use public transportation take 30% more steps per day than people who drive cars as their primary form of transportation.[32]

URBAN CONTEXT

While urban areas tend to provide more transportation options, lower-income and minority neighborhoods often receive less service.

NON-URBAN CONTEXT

Non-urban areas are less likely to have bike lanes or sidewalks adjacent to the road, which greatly deters bicyclist and pedestrian usage along busy roads.[33]
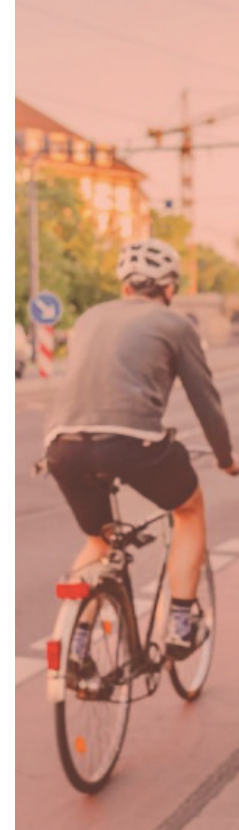
TACTICAL URBANISM

High-traffic and high-speed streets are often unsafe for people walking and biking.

Tactical Urbanism consists of small interventions to streets and sidewalks to create a safer and more pleasant environment for pedestrians. These are temporary treatments but if successful can become permanent. On a street where traffic moves too quickly, _safe walkways can be reclaimed by building out crosswalks or buffering sidewalks_ into the streetway with planters and benches to narrow down the streets and slow down traffic. Another example of tactical urbanism is to **transform underutilized parking spaces into small park spaces** that increase green space along a corridor. Clinics can partner with community groups and local designers to ensure the safety and usefulness of these sorts of interventions.

1: PARK(ING) DAY | P0

Low Barrier

Organize a "PARK(ing) Day" where local organizations and school groups are encouraged to develop small parklets.

## 2: PERMANENT INSTALLATION | P0

Next Steps

Initiate a neighborhood surveying process to prioritize where a more permanent streetscape intervention might be made. Look at small streets that might be good candidates for being blocked off for pedestrians one day a month.

3: ADVOCACY | PA

Long-Term

Advocate in citywide planning processes to evaluate other locations that would benefit from streetscape interventions.

TOPIC CROSS-OVERS
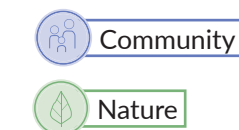
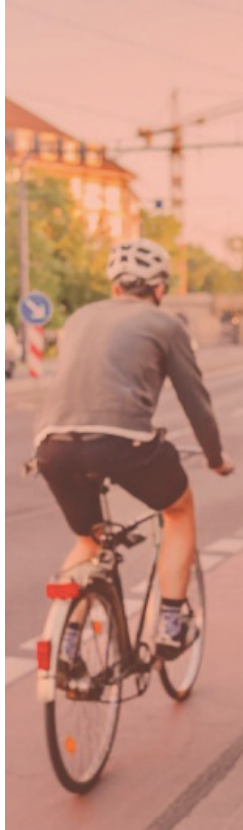- Community
- Nature

POTENTIAL PARTNERS

- Community Organizations
- Local City Planners and Designers
- School Districts

FURTHER RESOURCES

- CityLab
- Tactical Urbanism Guide
- Congress for New Urbanism
- Better Block

CASE STUDY

Park(ing) Day started in 2005, when a few urban designers intervened to design small parks in parking spaces on an underdeveloped block in San Francisco. It is now an annual event across the world where community groups, students, and designers come together to build micro-parks in parallel parking spots along street corridors. The micro-parks encourage walkability and a more beautiful experience of the street.

WALK AUDITS

Those who walk to work, school, or as a primary mode of transportation often encounter sidewalks that are incomplete, in bad condition, or are inaccessible.

In communities with high-traffic roads or incomplete sidewalks, a __walk audit can be performed to assess the quality of sidewalks__ and safety of routes that are commonly taken. These walk audits become data to help advocate for infrastructural improvements and additions along popular walking corridors. Clinics can partner with local organizations to conduct these audits and then help to reach out to the agencies responsible for making street improvements. A successful walk audit will allow for a safer environment for all community members who share the sidewalks and will reduce traffic hazards from people who choose to walk in the street due to inaccessible sidewalks.

1: LOCAL WALK AUDIT | PR

Low Barrier

Start by organizing a walk audit with interested community members to assess the quality of sidewalks and crosswalks around clinics.

2: COMPREHENSIVE WALK AUDIT | PR

Next Steps

Conduct comprehensive walk audits, especially in neighborhoods that connect to schools. Work with schools and school districts to organize walking groups to help young people safely walk to and from school.

3: POLICY | PA

Long-Term

Engage with the local planning or public works office to get sidewalks repaired or added in places where they are not adequate.

TOPIC CROSS-OVERS

Safety

POTENTIAL PARTNERS

- Local Schools
- Community Groups
- Police Departments
- City Planners

FURTHER RESOURCES

- Safe Routes to Schools Partnerships
- Active Trans Org

CASE STUDY

During the Pioneer Square Walking Audit in Seattle, forty community members got together to walk around their neighborhood and score the walkability of the streets. The in-depth study of the neighborhood allowed them to define a series of projects and immediate steps to improve the walkability of the area.

Image: Alliance for Pioneer Square
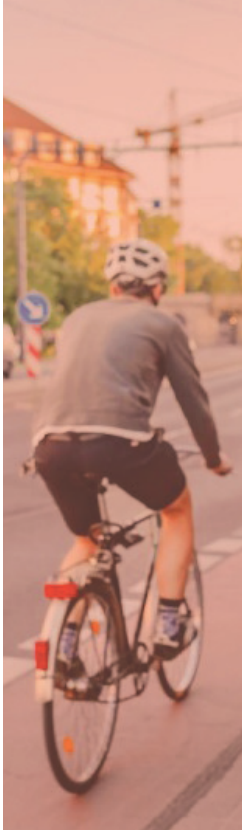
COMPLETE STREETS POLICIES

Pedestrians, cyclists, and drivers must share pathways when a sidewalk or bike lane is missing or incomplete.

Complete streets are designed for everyone to get to where they are going safely, regardless of their mode of transportation. These policies focus on safe biking, walking, driving, and transit use for those of all ages and abilities. They may include installing improvements like sidewalks, median crossing islands, traffic calming measures, bicycle accommodations, and public transit accommodations. __Clinics can help to advocate for a suite of Complete Streets policies that will improve the safety and comfort of all street users.__ These policies may be enacted under a broader Vision Zero strategy, which seeks to eliminate all traffic fatalities and severe injuries.

1: COMMUNITY SURVEY | PR

Low Barrier

Ask patients what route they took to the clinic, their mode of transportation, and if they felt safe during their trip. Use this information to identify problem streets close to the clinic.

2: POLICY | PA

Next Steps

Work with local city planners, nonprofits, designers, and stakeholders to advocate for Complete Streets policies.

3: PROJECT PHASING | PA

Long-Term

Work with local city planners and designers to make sure the policy is implemented and carried through in local projects.

TOPIC CROSS-OVERS

Safety

POTENTIAL PARTNERS

- Police Departments
- City Planners
- School Districts
- Bicycle Advocacy Groups

FURTHER RESOURCES

- Smart Growth America
- Transportation.gov
- American Planning Association
- Pedbikeinfo.org
- National Complete Streets Coalition

CASE STUDY

In Santa Monica, California, a reconfiguration of Ocean Boulevard, including parallel parking, a center left turn lane, and new bicycle lanes, improved safety, with the total number of crashes dropping 65% in the first nine months after changes.

Image: Spoke.org
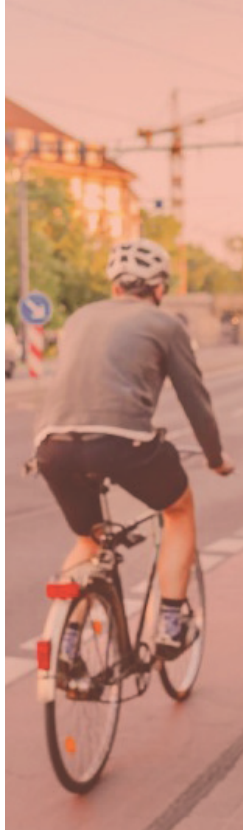
BIKE PROGRAMS

Cyclists encounter a number of hazards in the course of their daily commutes, from distracted drivers to tricky intersections that require quick thinking and a knowledge of the rules of the road to proceed safely.

One way to increase cyclist safety in busy roadways is to **provide classes for safe driving and safe bicycling**. *These classes can be convened at local clinics and can involve leading groups of cyclists together through busy streets to help them build up their competency and confidence around safe cycling. Partner with bike advocacy organizations or local bike shops to host these group cycling classes. These classes will help to increase the overall number of cyclists who feel comfortable commuting via bicycle on a daily basis.*

1: COMMUNITY COURSES | PR

Low Barrier
Partner with local biking community organizations to offer safe biking courses to interested community members.

2: COMMUNTY BIKE RIDES | PR

Next Steps
Organize community bike rides to help new cyclists gain comfort with riding along busy streets.

3: BIKE-SHARE | PR

Long-Term
Sponsor a bike-share program, or provide bikes for temporary rental at the clinic.

TOPIC CROSS-OVERS

Safety

POTENTIAL PARTNERS

- Bike Advocacy Groups
- Bike Shops
- City Planning Offices

FURTHER RESOURCES

- Bike Houston
- Bike League.org
- The Street Trust

CASE STUDY

Bike Houston provides courses to help Houstonians ride safely. They teach the basics of cycling, safety lessons for biking in traffic, and safety lessons for drivers who encounter cyclists. These courses are offered online and in-person.

Image: Bike Houston

NATURE

Goal: Easy, safe access to recreational open space and nature.

Public parks and access to nature play a critical role in public health because they are accessible ways for the public to address multiple facets of personal health and well-being. Research has shown that adults who visit parks monthly are four times more likely to meet recommended levels of physical activity. However, active recreation is not the only reason people visit parks.[34] Other health benefits include parks' ability to support mental health through community-building, positive mental health benefits of being in natural spaces, and the many other environmental health benefits these functioning ecosystems provide.

HEALTH IMPACT

- Adolescents who play sports have a lower body mass index and are less likely to have smoked cigarettes or used drugs [35]
- Walking for thirty minutes a day has been shown to improve circulation, slow bone density loss, lower blood pressure, and strengthen the heart [36]
- Trees have been shown to reduce depressive symptoms. In one study, adults with major depressive disorder reported improvements in both mood and cognitive performance after taking weekly walks on streets with trees.[37]

URBAN CONTEXT

On average, only 54% of residents live within a half-mile of a park in the 100 largest metro areas in the United States.[38] Sprawling urban exurbs and suburban areas also tend to experience inadequate park access. In both dense and sprawling areas, walkability and transit availability influence park access.

NON-URBAN CONTEXT

Measures of accessibility for parks and nature are different in rural contexts where a lack of public transportation infrastructure and public green spaces can reduce or even eliminate the possibility of going to a park.

STEWARDSHIP DAYS

Often, parks and natural areas can be neglected and overrun with trash and invasive species.

*Clinics can host or attend volunteer stewardship days at local parks to address some of these issues. Volunteer activities, such as **weeding, picking up trash, and removing invasive species are physical activity opportunities for participants**, and also encourage social investment in local parks and community.*

1: ADVERTISE VOLUNTEER DAYS | PR

Low Barrier

Clinics can post local volunteer opportunities on community boards at the clinic.

2: CLEAN-UP EVENT | PR

Next Steps

Clinics can organize an event to volunteer at a park clean-up close to the clinic. This also promotes community-building.

3: SPONSOR PARK MAINTENANCE | PR

Long-Term

Clinics can sponsor a park in the long-term, similar to the highway sponsor system.

TOPIC CROSS-OVERS

- Community
- Safety

POTENTIAL PARTNERS

- Local Conservation Organizations

FURTHER RESOURCES

- Keep America Beautiful
- The Nature Conservancy
- Litter Project

CASE STUDY

Keep Texas Beautiful is a conservation organization that keeps a list of local affiliates that clinics can connect with to co-host volunteer days. These sorts of non-profit umbrella organizations exist throughout the nation and can serve as a place for clinics to find opportunities to volunteer.

Image: Keep Texas Beautiful

POCKET PARKS

Low-income areas often have less trees, open space, greenery, and parks. These neighborhood assets support physical health by providing places to exercise and support mental health through community-building and the provision of relaxing natural space.

Trees and vegetation in parks also help cool the areas around them and filter air. Clinics may not have the capacity or land acquisition abilities to build large parks; however, they can still contribute to creating recreational open space. Pocket parks are parks that are less than two acres in size and are sometimes as small as a parking space. **Clinics can build pocket parks in underutilized parking spaces on their property, adjacent vacant lots, or work with their municipalities** to sponsor a pocket park in an undertutilized parking space in the right-of-way.

1: PARTICIPATE IN PARK(ING) DAY | PO

Low Barrier

Clinics can participate in the annual PARK(ing) Day, building a temporary public park in an unused parking space.

2: BUILD A POCKET PARK | PO

Next Steps

Clinics can build pocket parks in underutilized parking spaces on their property, adjacent vacant lots, or work with their municipalities to sponsor a pocket park in an undertutilized parking space in the ROW.

3: SPONSOR A PARK | PR

Long-Term

Clinics can sponsor a permanent park, advocate for more parks, and fundraise for new parks within communities.

TOPIC CROSS-OVERS
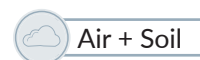
- Air + Soil
- Heat
- Nature
- Community

POTENTIAL PARTNERS

- Municipalities
- Conservation and Environmental Groups
- Corporations with Large Lots

FURTHER RESOURCES

- National Parks and Recreation Association
- Project for Public Places
- American Society of Landscape Architects

CASE STUDY

A grassroots effort in San Diego turned a vacant lot into a pocket park and gathering space. The BAME Community Development Organization received permission and a 5-year lease from the property's owner to build a park with the help of the community.

Image: BAME

NATURE RX

Mental health issues such as depression and anxiety often go untreated and undiscussed.

Nature Rx is a program where clinic physicians and other **healthcare providers can "prescribe" time in nature for mild depression**, mild obesity, cardiovascular risk factors such as hypertension or diabetes, or lack of physical activity. Recipients may receive a free pass to local botanic gardens, state parks, or nature centers with walking trails.

1: MAP LOCAL GREENSPACES | PR

Low Barrier

Clinics can provide a map of local parks, trails, nature centers, and greenbelts to patients who receive the Nature Rx. This can be combined with other health giveaways, such as healthy snacks.

2: WALK WITH A DOC | PR

Next Steps

Walk with a Doc is a monthly event where walkers are paired with a healthcare professional and walk one to two miles with the provider, during which they can ask the provider health-related questions.

3: FREE ENTRY TO PARKS | PR

Long-Term

Clinics can partner with local state parks, botanic gardens, and nature centers who will provide those prescribed a Nature Rx with a free month of entry.

TOPIC CROSS-OVERS

- Community

POTENTIAL PARTNERS

- Botanic Gardens
- Nature Centers
- State Parks

FURTHER RESOURCES

- Nature Rx
- Mental Health America
- National Alliance on Mental Health

CASE STUDY

Tidelands Health Family Medicine in North Carolina initiated a Nature Rx Program and collaborated with local botanic garden Brookgreen Gardens to provide a 30-day free pass to patients who were prescribed a Nature Prescription at the hospital.

Image: Eugene Buchko

ACCESSIBLE PARKS

Many park activities do not provide a broad range of uses for children, teenagers, young adults, and elderly populations.

*Clinics can support community health by sponsoring parks programming or parks amenities, such as nature play spaces for children or physical therapy equipment for the elderly. This helps **children develop physically and helps the elderly maintain activity** to prevent degeneration of muscles.*

1: PAINTED PLAY | P0

Low Barrier

Clinics can paint puzzles and games onto underutilized parts of their parking lots for children to play and develop skills. These areas can be fenced off for safety.

2: OUTDOOR FITNESS | P0

Next Steps

Clinics can build simple outdoor fitness areas for older adults or provide benches and places to socialize.

3: SPONSOR EQUIPMENT | PR

Long-Term

Clinics can sponsor play and fitness equipment in community parks.

TOPIC CROSS-OVERS

Community

POTENTIAL PARTNERS

- School Districts
- Senior Centers
- Churches

FURTHER RESOURCES

- Natural Learning Initiative
- National Council on Aging
- UCLA Luskin School of Public Affairs

CASE STUDY

The Urban Thinkscape project in West Philadelphia enriches public spaces with opportunities for children and their caregivers to play and learn. They transform everyday outdoor places, such as bus stops and sidewalks, into places to play, jump, and learn. These opportunities for play help children develop spatial, language, and socioemotional skills.

SUPPORT BIODIVERSITY

As cities and rural areas develop, biodiversity in the forests, prairies, and other natural areas they replace are lost.

*Biodiversity is foundational to human health because we rely on ecosystems for food, fresh water, climate regulation, recreation, and flood reduction. Natural spaces also provide more intangible benefits, such as beauty and mental restoration. Clinics can help maintain these benefits for the communities they serve by **both supporting regional conservation efforts and through landscaping with native plants** to create bird and animal habitats and foster biodiversity.*

1: CREATE WILDLIFE HABITAT | P0

Low Barrier

Clinics can create a small, planted Certified Wildlife Habitat as part of the landscaping of their clinic.

2: SUPPORT REGIONAL EFFORTS | PR

Next Steps

Clinics can support regional conservation efforts by donating to or organizing volunteer days with land trusts and other environmental non-profits.

3: NATIVE PLANTINGS | P0

Long-Term

Clinics can convert all sod and other non-native grass to native plantings on the clinic grounds.

TOPIC CROSS-OVERS

Air + Soil   Water

Nature

POTENTIAL PARTNERS

- Conservation Organizations
- Municipalities
- State Agencies

FURTHER RESOURCES

- The Nature Conservancy
- National Wildlife Foundation

CASE STUDY

The National Wildlife Federation has a "Certified Wildlife Habitat" program where homes and businesses can create habitat for bees, butterflies, birds, and amphibians. In addition to habitat creation, exposure to landscapes with varied plant species and types of pollen helps children develop normal immune responses to allergens and other disease-causing factors.

AIR+SOIL

Goal: Reduced exposure to pollution in the air and soil and improved environmental quality.

The release of particulate matter (PM), nitrogen dioxide, and the creation of ozone from a combination of pollutants released by industry and automobiles into the atmosphere all negatively affect physical health, especially respiratory and heart health. Past and current industrial activity discharges dangerous chemicals and toxic metals into soil, water, and air. Brownfields, which are parcels of land that were formerly industrialized, often have highly contaminated soils that threaten the health of communities that live on or around the brownfield.

HEALTH IMPACT

- The range of health impacts varies due to the type of formerly polluting or presently polluting industry. [39]
- Some side effects of chemical or toxic heavy metal soil or groundwater contamination can include gastrointestinal illness, reproductive problems, neurological disorders, liver, kidney, and intestinal damage, anemia, and cancer.[40]
- PM exposure has been linked to a variety of problems, including premature death in people with heart or lung disease, heart attacks, and aggravated asthma. Breathing ozone and nitrogen oxide can trigger health problems including chest pain, coughing, airway inflammation, and reduced lung function.[41]

URBAN CONTEXT

In urban contexts, air quality is heavily influenced by proximity to high capacity roadways as well as manufacturing and industrial facilities. Exposure can be consistent if the source is stationary like a facility, or it can be temporary in the case of mobile sources of pollution, such as automobiles. Exposure to contaminated soil may come from proximity to active or abandoned sites as well as living on land that previously had a polluting use.

NON-URBAN CONTEXT

Most oil and gas refineries are located in non-urban locations, which means that residents in these areas are at increased risk of respiratory-related illnesses.[42]

TREE PLANTING

The number of trees in a neighborhood can impact the health of people in that neighborhood.

Trees provide a variety of services, including air and soil remediation. This means that tree plantings can contribute to improving local air and soil quality. <u>Trees remove carbon dioxide and other particulates from the air, and some trees can remove toxins from the soil.</u> *In addition to these two major features, trees can help reduce flooding, support evaporative cooling, provide shade, and improve emotional well-being through stress reduction. Clinics can coordinate tree plantings outside their clinic and in the surrounding neighborhoods to help provide the of health benefits of trees.*

1: PLANT TREES | P0

Low Barrier — Plant trees at clinic property, and calculate how much pollution is removed by those trees using the online i-Tree tool.

2: NEIGHBORHOOD TREES | P0

Next Steps — Plant trees in the neighborhood that surrounds the clinic, especially along pedestrian-heavy roads, to provide shade and filter air pollutants.

3: ARBOR DAY EVENTS | P0

Long-Term — Clinics can partner with universities, student groups, or corporations to host large Arbor Day events.

TOPIC CROSS-OVERS

- Community
- Heat
- Nature

POTENTIAL PARTNERS

- Universities
- Student Groups
- Corporations

FURTHER RESOURCES

- Practice Greenhealth
- Arbor Day Foundation
- i-Tree
- Trees Foundation

CASE STUDY

The Clarinda Chapter of Trees Forever, a nonprofit environmental group, received a $35,000 grant from Alliant Energy to purchase trees for placement at the Clarinda Regional Health Center. Trees Forever helped to pool resources together in order to support tree planting efforts.

Image: Clarinda Regional Health Center
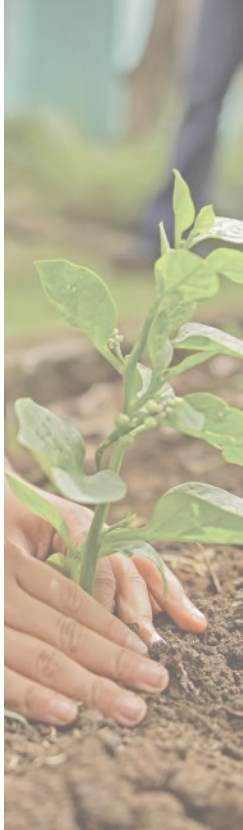
POLLUTION RESTRICTIONS

While individual actions, like driving cars, can contribute to air pollution, there are larger factors influencing air quality, such as pollution from factories and industry.

__Policy is one way to address sources of air pollution generated at large scales.__ This is a great opportunity for clinics to leverage their relationships and resources. Clinics can advocate for policies and regulations that reduce and regulate point sources of air and soil pollution. Clinics may also spread information about how community members are being impacted by industrial-scale pollution.

1: HEALTH INFORMATION | PR

Low Barrier

Clinics can provide information to patients to communicate the negative health consequences of exposure to air and soil pollution.

2: LEGAL ADVICE | PR

Next Steps

Clinics can host opportunities for legal clinics and nonprofits to speak with renters and homeowners about their rights, state and federal regulations, and their options if they would like to pursue legal action.

3: POLICY | PA

Long-Term

Clinics can partner with legal clinics and environmental justice organizations to draft policies addressing industrial sources of air pollution.

TOPIC CROSS-OVERS

🏠 Home

POTENTIAL PARTNERS

- Legal Clinics
- Environmental Justice Organizations
- Municipalities

FURTHER RESOURCES

- Air Alliance Houston
- Environmental Defense Fund

CASE STUDY

Environment Texas has filed a lawsuit against ExxonMobil's Baytown refinery as well as launched the Neighborhood Witness program that alerts people living near polluting facilities when violations happen. Environment Texas combines research, stakeholders, and litigation in order to enforce adherence to clean air regulations.

Image: Environment Texas

SOIL QUALITY MONITORING

Residents living on soil contaminated from a previous land use or nearby industry need support in monitoring their health and soil quality.

Monitoring and evaluating next steps requires time and resources that individuals might not have. __Clinics can partner with nonprofits and other organizations to test soil quality and conduct health screenings to get a sense of community exposure and need.__ It is especially important that soil used to grow fruits and vegetables is tested for lead or other environmental pollutants.

1: SOIL-TESTING KITS | PR

Low Barrier

Clinics can provide soil-testing kits to community members, especially before any efforts to plant fruit and vegetable gardens.

2: NEIGHBORHOOD TREES | PO

Next Steps

Clinics can partner with local universities, nonprofits focused on environmental justice, and landscape architects to help homeowners understand the cost of landscaping measures to reduce exposure to soil with high lead levels or other toxins.

3: ARBOR DAY EVENTS | PO

Long-Term

Clinics can partner with a local environmental-based nonprofits or university health departments and host health screenings in tandem with providing information on how soil quality impacts health.

TOPIC CROSS-OVERS

🏠 Home

🍎 Food

POTENTIAL PARTNERS

- Land Grant Universities
- State Health Departments
- Landscape Architects
- Landscape Companies

FURTHER RESOURCES

- Boston Lead-Safe Yard Project
- Healthy Soils, Healthy Communities
- American Public Health Association

CASE STUDY

The Boston Lead-Safe Yard Project uses landscaping techniques to reduce lead contamination, informs residents about the risks of lead exposure, and provides data about lead levels in soil. Partnerships include residents, a neighborhood health center, the Department of Public Health, and Boston University's School of Public Health.

Image: Peter Stoop

WATER

Goal: Abundant, safe drinking water for all; reduced flooding.

During a rain, stormwater moves over the ground, picking up debris and pollutants from surfaces and flowing into lakes, rivers, wetlands, and groundwater. This "nonpoint pollution" can include fertilizers, herbicides and pesticides, oil, grease, and toxic chemicals from urban runoff. Nonpoint source pollution is the leading cause of water quality problems in the United States.[43] In private wells, water quality can be degraded by soil contamination from construction, polluting industries, aging infrastructure, and periods of drought. Many methods that improve water quality can also reduce the impact of flooding which may have long-term mental health impacts.

HEALTH IMPACT

- Contaminants in water can lead to gastrointestinal illness, reproductive problems, and neurological disorders.[44]
- Health impacts of heavy metals and other contaminants such as lead, cadmium, and PCBs include increased cancer risk, impaired cognitive capabilities, and lowered immune responses. [43]
- Pathogens are bacteria and viruses that can be found in water and cause diseases in humans. They are often present in stormwater runoff.[43]

URBAN CONTEXT

Most urban areas are served by public water systems that use water treatment and monitoring to protect households from waterborne contaminants. However, water quality in urban areas can still be affected by nonpoint source pollution from industrial discharge, automobiles, wastewater, and polluted stormwater runoff. These pollutants can lower drinking-water quality and create water bodies that aren't safe for recreation.[45]

NON-URBAN CONTEXT

An estimated 13 million households rely on private wells for drinking water. Private wells are not subject to the same water quality testing and treatment as public drinking water systems that serve urban areas. It is a private well-owner's responsibility to ensure his or her well is not contaminated to avoid the possible health consequences of contaminants.
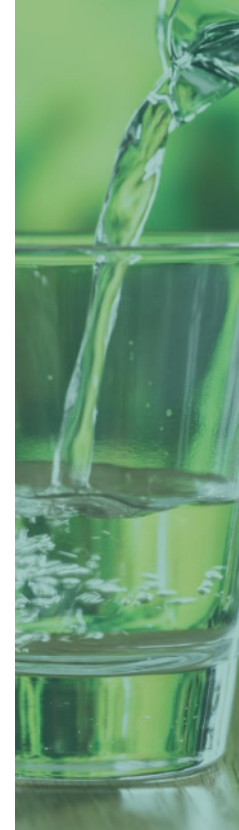
REDUCE IMPERVIOUS COVER

Impervious cover, such as parking lots, roads, and buildings, prevent the absorption of stormwater into soil.

Instead of soaking into the ground, stormwater runs off impervious surfaces, picking up pollutants such as car oil and other chemicals and then enters streams, lakes, and other water bodies. Converting traditional paving materials at clinics to permeable paving materials will reduce polluted stormwater runoff, infiltrate water into the ground, and improve local water quality.

1: CALCULATE STORMWATER | P0

Low Barrier

Calculate how much stormwater runs off the clinic property by using the EPA's National Stormwater Calculator (https://www.epa.gov/water-research/national-stormwater-calculator).

2: POCKET PRAIRIES | P0
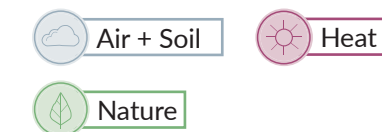
Next Steps

Remove unused parking lot spaces and plant native vegetation as "pocket prairies."

3: PERMEABLE PAVERS | P0

Long-Term

Assess where traditional paving materials around the clinic can be converted into permeable pavers and create a phasing strategy.

TOPIC CROSS-OVERS

- Air + Soil
- Heat
- Nature

POTENTIAL PARTNERS

- Municipalities
- Landscape Supply Companies
- Plant Nurseries

FURTHER RESOURCES

- Environmental Protection Agency
- American Society of Landscape Architects
- National Resource Defense Council

CASE STUDY

Cleveland Clinic in Ohio has pledged to integrate innovative solutions to environmental challenges that support public health and benefit ecological communities. While building an addition to their family health center, they constructed new parking lots using a permeable paving system that infiltrates stormwater into the ground, preventing it from entering and polluting a nearby wetland.

GREEN INFRASTRUCTURE

In urban environments, stormwater runs off impervious surfaces, picking up pollutants that wash into water bodies.

Heavy rain events on areas with a high amount of impervious surfaces can also cause flooding in homes and businesses. <u>Green infrastructure is a natural approach to stormwater management that integrates plants, grading of land, and special soil to absorb and filter stormwater runoff</u> into the ground before it causes flooding.

1: RAIN BARRELS | PO

Low Barrier

Capture rainwater from clinic buildings with rain barrels. The water can be saved and used later for landscape irrigation.

2: IDENTIFY FUNDING | PR

Next Steps

Identify sustainable funding sources to implement green infrastructure, such as rain gardens, in the surrounding community. Examples may include grants, donations, and city incentive programs.

3: INSTALL GREEN INFRASTRUCTURE | PO

Long-Term

Install green infrastructure to absorb stormwater, such as rain gardens and bioswales along parking lots edges at the clinic property.

TOPIC CROSS-OVERS

- Air + Soil
- Heat
- Nature

POTENTIAL PARTNERS

- State Environmental Organizations
- Landscape Architects
- Plant Nurseries

FURTHER RESOURCES

- EPA National Stormwater Calculator
- American Society of Landscape Architects
- National Resource Defense Council
- H-GAC Low Impact Development Guide

CASE STUDY

MedStar Harbor Hospital in Maryland, along with several local and statewide partners, attained grant funding from the Watershed Assistance Grant Program to design nine green infrastructure facilities. These projects will rehabilitate 18 acres of impervious surface around the hospital to help improve the quality of stormwater discharge into the nearby Patapsco River. It will also increase the quality and amount of green space that patients can access.
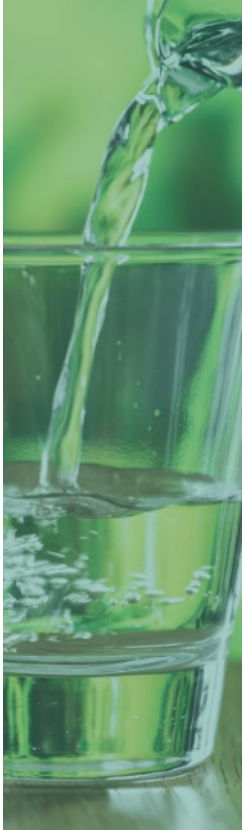
WATER CONSERVATION

Practicing conservation frees up more water for communities who are in need and models an environmentally responsible attitude to the preservation of globally shared resources.

Utilizing less of these resources will also save individual clinics money and put less of a strain on the surrounding environment. <u>Conserving water used at the clinic contributes to decreased water demand on stressed municipal water supplies and treatment systems</u>, thus decreasing risks of water shortages. Installing low-flow sinks and toilets and providing hand-sanitizer stations can also operate as an educational tool for those who visit the clinic.

1: HAND SANITIZING STATIONS | PO

Low Barrier

Install hand sanitizer stations to reduce the usage of water in the clinic for patients, with signage about the benefits of hand sanitizer versus water washing. This is not applicable to healthcare staff, who need to wash their hands with soap and water as standard sanitation procedures.

2: WATER AUDIT | PO

Next Steps

Conduct a water audit to assess opportunities for water conservation. Install low-flow, dual-flush toilets in the clinics to reduce the usage of water.

3: GRAYWATER | PO

Long-Term

Invest in a graywater system for the clinic. Xeriscape greenscape as appropriate. Invest in leak detection and repairs.

TOPIC CROSS-OVERS

- Community

POTENTIAL PARTNERS

- Municipalities
- Watershed Districts
- Utility Companies

FURTHER RESOURCES

- Energystar.gov
- Environmental Protection Agency
- U.S. Green Building Council

CASE STUDY

Providence St. Peter Hospital in Washington has spent the last decade implementing water-savings measures. These efforts have allowed them to save more than 31 million gallons of water, and 1.5 million dollars.

Image: Wikimedia

WELL PROGRAMS

Many rural and suburban residents are served by wells on their properties that range in age and quality.

A poorly maintained or compromised well can present a serious health risk to the family who depends upon it. Clinics can partner with a group of trained associates from land grant universities to provide well assessments and help residents keep their wells in safe and usable condition. They may also subsidize any related fees by working with the university to secure funds for testing in target areas where water contamination may be suspected due to old pipes, presence of agriculture or heavy industry, or observed negative water quality by residents.

1: WELL-TESTING KITS | P0

Low Barrier

Acquire and distribute well-testing kits to interested community members.

2: PROVIDE TESTING | P0

Next Steps

Partner with land grant universities that often provide low-cost testing of residents' water at home to determine whether harmful heavy metals or chemicals are present.

3: WELL REPAIR | P0

Long-Term

Partner with foundations, banks, and the Rural Community Assistance Corporation to secure funding for low-interest loans and grants to repair damaged wells.

TOPIC CROSS-OVERS

Community

POTENTIAL PARTNERS

- Foundations
- Banks
- Rural Assistance Corporation
- Land Grant Universities

FURTHER RESOURCES

- USEPA
- Ruralhealthinfo.org

CASE STUDY

Rural Community Assistance Corporation's Individual Well Program launched as a pilot to provide free well assessments and educational resources for private well owners. Well owners are able to apply for a well assessment online, by mail, or by fax. The resulting inspection report provides recommendations for possible repairs and water treatment options and for follow-up technical assistance in the future.

HEAT

Goal: Neighborhoods with respite areas from high temperatures.

Illness associated with heat is the most common cause of weather-related deaths in the United States. Heat-stress illnesses (HSI) such as heat stroke are a threat to the health of both urban and non-urban communities and are expected to increase as the climate warms. In the United States, extreme heat is defined as a period of two to three days of high heat and humidity with temperatures above 90 degrees.[46] Prolonged exposure to extreme heat can cause the body to overwork, causing heat-stress illness, heat stroke, or heat exhaustion.[47]

HEALTH IMPACT

- Heat-stress illness is a category that includes mild heat cramps, heat exhaustion, and life-threatening heat stroke. HSI was the primary cause of environmental exposure-related injuries treated in emergency departments in the U.S. from 2001 to 2004.[48]
- Heat stroke occurs when the body's temperature rises above 104 degrees. Untreated heat stroke can damage the brain, heart, kidneys, and muscles. The longer treatment is delayed, the worse the damage to the body, increasing the risk of serious health complications or death.[49]
- Heat exhaustion is an illness that happens after several days of exposure to high temperatures and inadequate fluid intake. Left untreated, it may cause stroke.[50]

URBAN CONTEXT

Highly urbanized cities have more paved surfaces that absorb and reflect back heat, leading to an increase in urban temperatures compared to surrounding non-urban areas. This puts urban residents at risk.

NON-URBAN CONTEXT

Farm laborers in rural communities are more vulnerable to heat-related illnesses than other populations living in urban and suburban areas.[51]
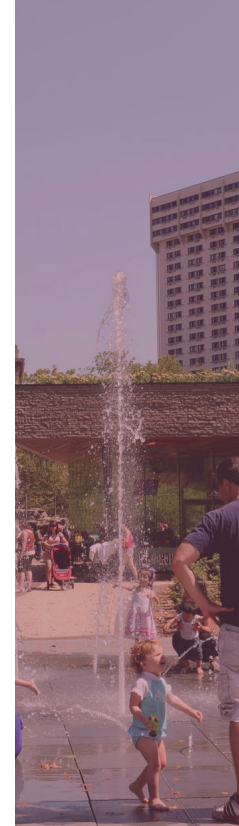
BECOME A COOLING CENTER

Those living without air conditioning, as well as the elderly and transit-dependent, are susceptible to heat stroke and other heat-related illnesses.

During heat waves and other periods of prolonged exposure to high temperatures, bodies need to recover through periods of cool rest to avoid heat-related illness or mortality. A __cooling center is an air-conditioned public space accessible to all community members__ as a place of respite from dangerously high heat. These spaces typically provide shade, water, and restrooms, and may also provide medical attention and referrals to social services. Clinics can partner with senior centers and other resource centers to become a designated cooling center.

1: INFORMATION | PR

Low Barrier
Create an informational pamphlet about the risks of prolonged heat exposure, who may be at greater risk of illness, and how certain medications may increase risk.

2: VOLUNTEERS | PR

Next Steps
Clinics can set up a system of volunteers to schedule well-being check-ins for at-risk groups during periods of prolonged summer heat, as well as provide meals and grocery delivery for transit-dependent individuals.

3: COOLING CENTER | PO

Long-Term
Establish the clinic as a publicly accessible cooling center. Provide seating, water, and restrooms.

TOPIC CROSS-OVERS

- Community
- Air + Soil

POTENTIAL PARTNERS

- Libraries
- Senior Centers
- Meals on Wheels
- Churches

FURTHER RESOURCES

- City of Boston Emergency Management
- Resiliencehub.org
- CDC.gov

CASE STUDY

The city of Boston provides a list of community centers with air conditioning, a map of pools, and public library locations that serve as cooling centers. They also provide multilingual informational pamphlets on the dangers of heat and how pre-existing conditions and medications may put some individuals at greater risk of heat-related illness.

TRANSFORM BUS STOPS

Public transportation passengers are vulnerable to heat-related illness as they walk to bus stops and wait for transit.

In cities with long wait times and few bus stops with adequate shading, riders are at even greater risk. Bus stops can become safer with the addition of benches, shade structures, and trees adjacent to bus stops and along major pedestrian corridors. Long-term, systemic solutions may include **improving bus service by expanding the transit network and adding additional routes with a greater density of stops***. Clinics can support efforts to transform bus stops in their surrounding areas and can advocate for expanded public transportation within their communities.*

1: PLANT TREES | PO

Low Barrier

Clinics can plant trees at bus stops near and en route to the clinic to provide shade and cooling through evapotranspiration.

2: ADVOCACY | PA

Next Steps

Clinics can advocate for policies that require bus stops, especially in densely developed areas that reach high temperatures, to have bus shelters or other shading structures.

3: UPGRADE BUS STOPS | PO

Long-Term

Clinics can partner with design firms and transportation departments for the design and implementation of shaded bus structures near and en route to the clinic.

TOPIC CROSS-OVERS

- Transportation
- Nature

POTENTIAL PARTNERS

- Department of Transportation
- Public Health Department
- Local Architecture Firms

FURTHER RESOURCES

- American Planning Association
- Transportation Research Board
- National Association of City Transportation Officials

CASE STUDY

Four students from Arizona State University designed ADA-compliant bus shelters meant to cool those waiting for buses by providing shade and respite from the heat. They will be built in 2020.
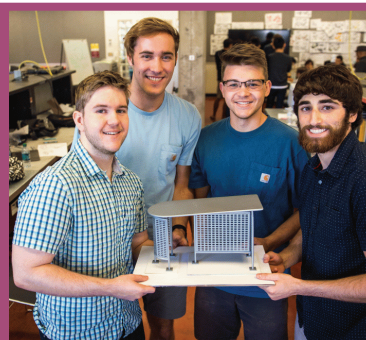
Image: Arizona State University

COOL URBAN HEAT ISLANDS

"Urban heat islands" occur where parking lots, roads, and buildings have almost completely replaced natural land cover and vegetation.

These surfaces absorb and retain heat, causing the air temperatures above them to be much hotter than surrounding areas. Temperatures can get dangerously high, which has a detrimental affect on air quality, putting those with asthma at additional risk. **Strategies to mitigate the urban heat island effect may include installing green roofs, tree planting, and replacing hot surfaces with "cool" pavement and reflective roofing material that absorbs less heat***. Small interventions, such as misting structures, can temporarily relieve pedestrians of hot temperatures.*

1: ADVOCATE | PA

Low Barrier

Clinics can advocate for urban development policies that require tree planting and urban heat island mitigation strategies, such as cool pavement.

2: PAINT COOL SURFACES | PO

Next Steps

Clinics can paint the surface of their parking lots and roof tops with light-reflective paint to reduce heat absorption, thereby decreasing ambient temperatures and improving thermal comfort.

3: GREEN ROOF | PO

Long-Term

Clinics can transform their rooftop into a living green roof, which decreases building heating and cooling costs and helps to mitigate the urban heat island effect. Trees also provide many of these same services.

TOPIC CROSS-OVERS

- Community
- Nature

POTENTIAL PARTNERS

- Nonprofits Focused on Public Health
- Nonprofits Focused on Conservation

FURTHER RESOURCES

- Environmental Protection Agency

CASE STUDY

Fareground is an urban foodhall with an outdoor eating area in downtown Austin. In summer and fall, temperatures in downtown Austin, Texas, can be uncomfortably hot. The designers of the outdoor eating area integrated a water misting structure that gently cools outdoor diners.

Image: Mosaia

HOME ENERGY EFFICIENCY

Low-income households often have to make tough choices about how to spend their money.

They may need to forgo high-cost air conditioning in order to save money to pay for food, healthcare, or other essentials. These choices, however, can put their health at risk. Heat illness can occur after prolonged daytime exposure to heat, and is even more likely to occur if bodies are not able to rest and recover in lower temperatures at night. Improving home efficiency and insulation can lessen the financial burden of air conditioning and helps keep heat from entering the home. Clinics can **partner with local energy providers to help homeowners and renters install better insulation** and connect clinic visitors with home improvement grant opportunities.

1: CONNECT RESOURCES | PR

Low Barrier
Connect clinic patients with resources for federal and state home weatherization and improvement grants.

2: WEATHERIZATION WORKSHOPS | PR

Next Steps
Co-host workshops on DIY home weatherization with local hardware stores and construction companies to empower community members to make their homes more energy efficient.

3: ADVOCACY | PA

Long-Term
Clinics can partner with nonprofits and community organizations to advocate for policies that ensure new and renovated buildings and housing are energy efficient and cool.

TOPIC CROSS-OVERS

Home

POTENTIAL PARTNERS

- Energy Providers
- Offices of Sustainability
- Local Hardware Stores

FURTHER RESOURCES

- Local Energy Alliance Program
- American Recovery and Reinvestment Act
- DOE Weatherization Assistance Program

CASE STUDY

Austin Energy offers weatherization assistance to low and moderate income families. These minor improvements enable homeowners to protect their health as well as save money.

Image: Austin Energy

Glossary of Terms

A

Active Living - physical and recreation activities aimed at promoting a healthier lifestyle and improving physical and emotional health.

Advocacy - support of litigation, lobbying, or public education that is intended to influence legislation.

Affordable Housing - a variety of housing typologies that are affordable for individuals and families who make below the median household income.

B

Brownfields - land that previously had an industrial or commercial use that is now contaminated or suspected to be contaminated as a result of pollutants and hazardous waste created by the former use.

C

Chronic Health Conditions - health conditions that have long-term effects and often require ongoing medical treatment.

Collective Efficacy - the ability of members within a group to influence the behavior of other members within their same group. This increases the capacity of neighborhoods to function more autonomously as they are able to look out for one another as a collective.

Community-Based Action - a collaborative approach that involves community stakeholders in the entirety of the process.

Community-Building - a variety of practices aimed at creating and strengthening communities. These practices can include the relationships community members have with each other as well as the relationships they have to their neighborhood.

Community Health Workers - members of a community selected to provide healthcare information and services because of their deeper understanding of the needs and barriers of the communities they are in.

Conservation - the use of natural resources and land without destroying them or causing harm.

D

Disparity - economic, environmental, and social differences in life outcomes that can be the result of the inequitable distribution of resources.

Displacement - involuntary or coerced movement of individuals or communities from their homes and neighborhoods to other areas.

E

Environmental Health - a branch of public health focused on how the environment impacts human health.

Exurbs - geographic regions that exist outside of dense urban centers and beyond suburbs.

Exposure Reduction - reducing the exposure of community members to hazardous chemicals in the air, soil, and water produced as a result of industrial activities.

Evapotranspiration - process by which water is brought into the atmosphere by evaporating off tree leaves, vegetation, and the earth's surface.

F

Food Security - a measure of a person's ability to have access to healthy and affordable food.

G

Gentrification - a process of displacement that can occur gradually (incremental rent or property tax increases; voluntary floodplain buy-outs) or immediately (mass evictions). Populations that experience gentrification are often already experiencing other forms of marginalization; for example, housing insecurity, food instability, poor environmental health.

Green and Healthy Homes - an initiative comprising programs and policies aimed at advocating for safe and energy-efficient homes by addressing the link between health and housing.

H

Health Clinic - healthcare facilities that primarily provide outpatient care.

Health Equity - the outcome of equitable access to social determinants of health.

Heat Exhaustion - a heat-stress illness caused by dehydration due to a lack of salt and water in the body, often occurring as a result of intense sweating.

Heat-Stress Illness - an umbrella term for the varied responses by the body to prolonged exposure to heat, or exposure to extreme heat, which can include heat exhaustion, heat stroke, heat cramps, and heat rash.

Heat Stroke - a heat-stress illness that results from the body reaching 104 degrees Fahrenheit or higher.

Housing Instability - the inability to secure and maintain long-term housing, which can include frequent homelessness, staying with friends and relatives, and frequent moving.

I

Inequity - the intentional or unintentional unfair treatment of individuals and communities, including actions that fail to address different needs with the same level of seriousness.

Institutionalized Racism - racism expressed in the systems and policies of social and political institutions. It is reflected in disparities regarding health, education, wealth, income, criminal justice, employment, housing, health care, political power and education, among other factors.

L

Legal Clinic - legal aids or law school programs that provide services to clients through the use of law school students and legal professionals.

N

Nonprofit - tax-exempt organizations and institutions that seek to advance a mission or cause; their funding can come from a variety of sources including grants and donors.

Non-urban - Areas outside dense urban environments. Includes suburban and rural areas.

P

PARK(ing) Day - a national event created by the American Society of Landscape Architects that draws in citizens and urbanists from around the globe to re-imagine parking spaces for a day in their respective cities. It calls attention to parking space utilization and transportation use.

Placemaking - an approach to planning and design that leverages community assets in order to create or enhance public spaces so that they serve to improve the social and economic wellness of a community.

Pocket Park - small green space that is usually a quarter-acre in size.

Proactive Rental Inspection - a program that ensures rental units are regularly inspected to meet health and safety standards.

Public Housing - includes a variety of housing typologies that are owned by the state and were created as affordable options for individuals who have lower incomes. These options are made affordable through restricted and subsidized rents.

Public Park - a green space that is open to the public and can support recreation and active living.

R

RCAC - Rural Community Assistance Corporation, provides technical and financial resources to help rural communities achieve their goals and meet their needs.

ROW - Right of Way, the section of a street that is owned by the respective city it is in; ownership extends from the street a few feet onto the curb and sidewalk. This ownership enables each city to have more control over maintenance and management of utilities.

Rural - geographic regions that are not densely populated and do not have dense developments and infrastructure.

S

Social Capital - the mutual benefits provided to members of a social network who have developed and maintained social cohesion. This capital can be used to gain access to resources that an individual might not ordinarily be able to attain on their own.

Social Cohesion - the degree to which members in a community think and feel that they are connected and can rely on one another.

Social Determinants of Health (SDOH) - the economic and social conditions that influence health outcomes in individuals and communities.

Social Isolation - occurs when a person is removed or disconnected from their social networks. can be caused as a result of unemployment, lack of mobility, or health issues.

Sprawling - growth of residential and commercial development over large expanses of land.

Stormwater Infrastructure - utilizes grey and green infrastructure in order to control flooding and manage the negative impacts of urban runoff.

T

Tactical Urbanism - low-cost, easy to implement, temporary changes to the built environment that provide opportunities to re-envision a neighborhood.

The Built Environment - contains the parts of the environment that are built and entirely influenced by human beings, including buildings and transportation infrastructure.

Transportation Infrastructure - includes any changes to the built environment that enhance mobility in the air, land, or water.

U

Urban - geographic regions that include towns and cities that have a high density of people, buildings, and infrastructure.

Urban Heat - increased temperatures as a result of heat being absorbed through various surfaces (i.e.,asphalt and concrete) and emitted back into the air.

V

Vision Zero - a strategy to eliminate traffic fatalities and injuries while maintaining healthy and equitable mobility for all.

W

Walkability - a measure of how easy it would be for a pedestrian to safely and comfortably walk through a space.

Walk Audit - an assessment of the walkability of an area.

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