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Going Upstream:

How our State Budget, Revenue,
and Policies can Improve Health

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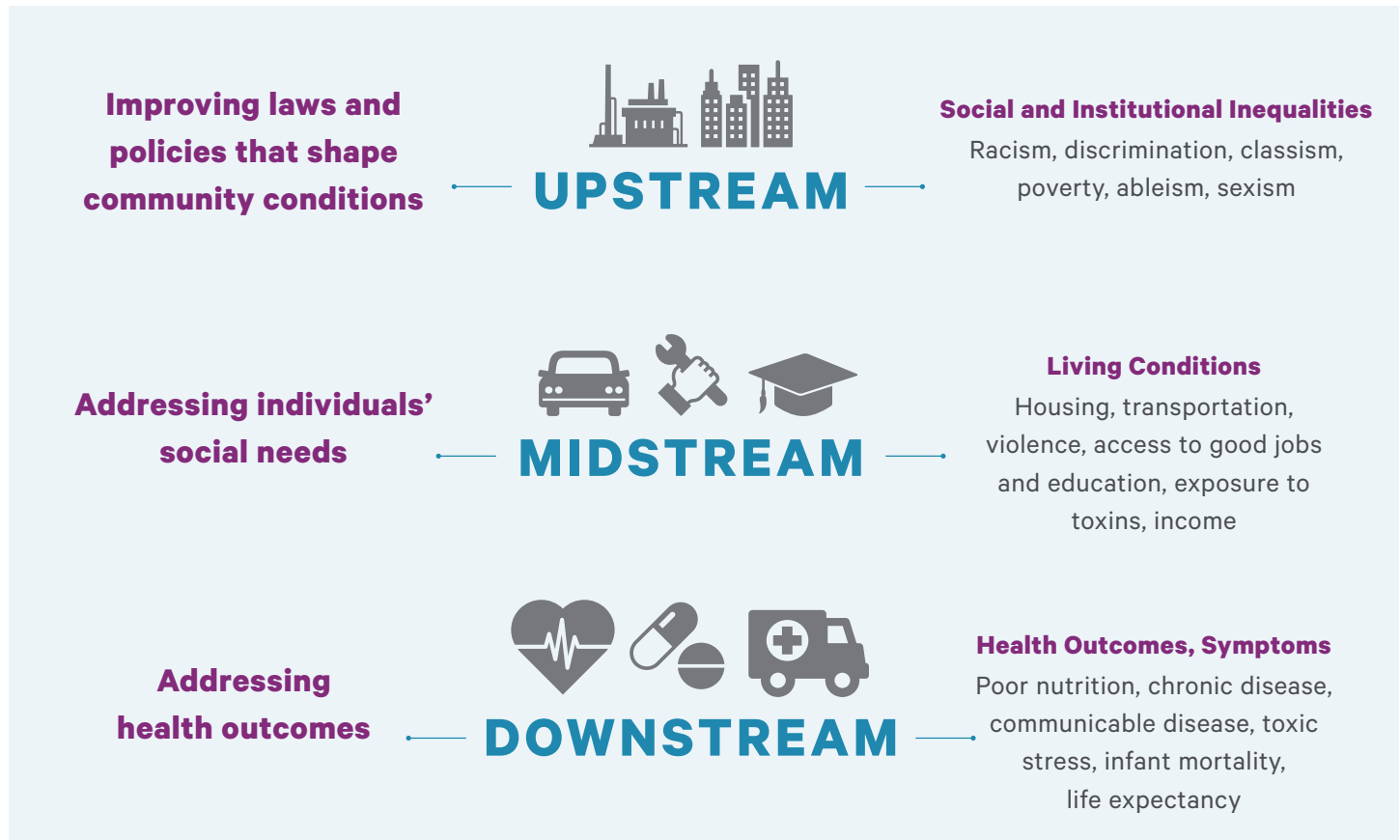
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Health begins where we live, work, learn, and play. Health is shaped long before we set foot in a doctor's office or hospital by our ability to access good education, quality jobs, stable housing, reliable transportation, and other factors.

Medical and clinical care only determines a small part of how healthy we are — only about a fifth according to some estimates.¹ Many other social, economic, and environmental factors influence how long we live, our overall well-being, and the illnesses from which we suffer.²

Going Upstream: Ways to Reduce Health Inequities



We can think of these as “upstream” and “downstream” conditions. In rivers, downstream water is affected by the conditions upstream. Similarly with a person's health, upstream factors like the **systemic racism** someone faces, the **poverty** her family experiences, the toxins to which she is exposed, and the type of housing available to her can all feed into her downstream health outcomes, such as lower life expectancy, more chronic illness, and higher infant mortality rates.

If we are to give every Massachusetts resident the chance to be healthy, we need to consider the range of contributors to health outcomes. Medical care is important, and we have among the best medical care in the nation, but medical care alone is insufficient for ensuring health. By directly addressing conditions throughout a person's life, we can help people be less vulnerable to poor health outcomes downstream.

Policymakers have an opportunity to give every person the chance to thrive by helping to improve the upstream factors that affect people’s health. These include programs that help people feel safe in their communities, fill their refrigerators with healthy food, afford the basics, and counteract the ongoing effects of racism and segregation. Proper investment in such programs and policies requires a healthy revenue stream. Further, lawmakers can avoid perpetuating upstream social inequities by raising revenue in a fair way.

Understanding the Terms: Examples in Housing and Food

Truly addressing the upstream “**social determinants of health**” that shape our well-being requires going beyond just addressing individual patients’ “**health-related social needs**.”

To illustrate the difference between these terms, one can take **housing insecurity** as an example. Lack of stable and affordable housing can have a range of effects on a person’s or family’s well-being — like difficulties obtaining a job or bank account and lack of a safe place to sleep or do homework. Health providers can address housing insecurity as a health-related social need by referring families and individuals to housing voucher providers and other services to keep people housed. Addressing housing as a social determinant of health requires addressing the underlying conditions that prevent people from accessing stable, high-quality housing — like poverty and the after-effects of historic segregation.

Defining Terms:

Throughout this report, you will see words in bold. These terms are defined in a glossary at the end of the report.

Another example is **food insecurity**. Those who struggle to access adequate, affordable, and healthy food may have trouble focusing in school (which affects their health in the long term) or experience stress and physical illness as a result. Health providers can address the health-related social need of food insecurity by referring patients to a food bank or suggesting they sign up for food assistance. Like with housing, addressing food access as a social determinant of health means ensuring all people in the community are able to afford nutritious foods and access stores that stock them.



A Bright Future for Whom?

Massachusetts, a state replete with medical and research institutions, leads the nation on many health-related outcomes.³ It is among the best in the country on insurance coverage⁴ and low infant mortality rates.⁵

Data Tells a Limited Story

Data can help understand disparities by race, ethnicity, nativity, gender, sexual orientation, and other aspects of identity. Data alone tell a limited story about the population it represents. We encourage users of the data to engage with different communities to develop a more accurate and meaningful understanding of the full story.

But the picture is not equally bright for everyone in the Commonwealth. Unequal living conditions mean many of our friends, family members, and neighbors continue to face poor health outcomes:

- Infant mortality rates among Black infants are more than double the rate of White infants and two and a half times the rate of Asian infants.⁶
- Youth who identified as gay, lesbian, or bisexual reported experiencing sexual violence at five times the rate as youth who identified as heterosexual.⁷
- Homicide is the third most common cause of death among young people in the Commonwealth. Young Black men are killed at a rate 30 times greater than young White men. Such violence also leaves survivors with lasting trauma.⁸
- Although Massachusetts had the nation's highest physician-to-population ratio in 2014, some municipalities — particularly in Western Massachusetts — have few or no practicing physicians.⁹
- Exposure to extremely fine particles from vehicle emissions (known as PM2.5) differs by geography and by race in Massachusetts. Springfield, which has the nation's highest rate of asthma-related emergency room visits, is exposed to these particles at a rate 43 percent higher than the state average. Boston's Chinatown experiences the highest rate of exposure to these particles in Massachusetts. Exposure to these particles is linked to increases in illness and death, primarily from heart and lung disease.¹⁰



Why Health Equity Matters

Equity is at the core of a community's overall health and well-being. **Health equity** is when every person — regardless of their race, ethnicity, gender, zip code, age, or other factor — has an equal chance to thrive. While a state like Massachusetts appears to perform well on overall health outcomes, some groups continue to face barriers to well-being.

Historically, communities of color and other non-dominant groups have faced barriers to obtaining a good education, owning homes (a fundamental way to build wealth), and accessing good jobs. The effects of these barriers persist today.¹¹

In Massachusetts, for instance, access to social and economic opportunities often depends on access to high-quality early, elementary, and secondary education. Many families struggle to afford private early education and care in Massachusetts — where costs outstrip most other states.¹² Meanwhile, almost 20,000 children are on the waitlist for child care assistance.¹³ In K-12 education, the after-effects of segregation leave many Black and Latinx students — particularly those from low-income families — concentrated in under-resourced schools.¹⁴

Ensuring each person has the best chance at a healthy life is an important goal on its own, but there is also evidence that equity benefits the entire community. People tend to be healthier overall in societies that are more equal (where wealth and income are not as concentrated at the top as they are in Massachusetts).¹⁵

Efforts to improve health equity in Massachusetts are unlikely to be effective if they do not confront and address differences in access to health care, good quality education, and upstream conditions like poverty and racism. Massachusetts, like many states and cities, is taking formal steps to approach health in an equitable way.

Massachusetts lawmakers created a new line item in the Fiscal Year (FY) 2019 budget to fund the state's Office of Health Equity at \$100,000 and has continued to fund it at the same level. The office has been in existence since FY 2009, but the Legislature had not designated funding for it until now. The office's goal is to “eliminate racial and ethnic health and health care disparities” in order to “address the social factors that influence health inequality.”¹⁶ This office can help identify opportunities for the state to better target our investments in ways that improve the health of every person, regardless of their race, gender, zip code, or socioeconomic status. It is an administrative challenge, however, for this office within the Executive Office of Health and Human Services to coordinate activities among multiple departments across several executive offices.



Healthy Investments in Upstream Solutions

The people of Massachusetts and lawmakers can address upstream contributors to health through deliberately targeted policies and, importantly, through the state budget. These policies include:

Education that sets students up for future success

Education's link to health comes partly through education's role in paving the way to better jobs, higher wages, and higher socioeconomic status. Those with higher incomes are more likely to live in places where they have better access to healthy foods, green space, and other resources that foster health.¹⁷ Further, the ongoing stress associated with not having enough money to pay for necessities such as food, rent, and school supplies can significantly affect a person's health.¹⁸ In addition to boosting a person's long-term social and economic opportunities, education also can boost health through nutrition programs, mental health services, and supports for students' family members.¹⁹



Because of these ripple effects, researchers have found that education is one of the strongest ways to improve well-being.²⁰ One study on community health found that for individual life expectancy, “the most consistent predictor of the likelihood of death in any given year is level of education.”²¹

A separate national study found that a 25-year-old U.S. adult without a high school diploma could expect to die nine years sooner than a peer who graduated from college.²²

Some scholars note the mutually reinforcing effect of health and education on each other. While education can improve a person's chances at good health, those who already experience good health tend to perform better in school. Students who face health issues — including those caused by their environments — are more likely to have trouble concentrating or to miss class because of their health.²³ This interaction between health and education highlights the benefit of taking a health equity approach to ensuring all people can succeed regardless of where they live or study.

Massachusetts may be one of the national leaders in education,²⁴ but an outdated funding formula for K-12 education has left schools in less wealthy communities with fewer resources.²⁵ The state is entering its first year to implement a landmark law, the Student Opportunity Act, to overhaul this formula over seven years. The overhaul is meant to better reflect the true costs of providing all children with a quality education — especially students facing poverty, students with lower English proficiency, and students with special needs. Meeting the needs of all students, regardless of their life circumstances, gives them a better shot at long-term mental and physical health.

However, key to successful implementation of the Student Opportunity Act is adequate and growing state revenues.

Good jobs and supports to help people make ends meet

Poverty can harm one's health by obstructing access to resources like safe housing, quality health care, and healthy foods. The stress from not having enough to get by also causes a range of issues from loneliness and substance use to heart disease and poor mental health.²⁶

Historical systemic racism has barred Black and Latinx workers from job opportunities, with ripple effects that continue today. Black and Latinx taxpayers in Massachusetts, therefore, tend to have lower incomes and less wealth than White households and tend to pay larger percentages of their incomes in taxes.²⁷

Aside from the benefits of steady wages, good quality jobs — ones that are stable and well-paid — tend to improve the physical and mental health of workers, while bad jobs can harm health.²⁸ For example, working people who are underemployed — without adequate work hours, income from work, and skill-use during work — report worse health and well-being than workers who are adequately employed, even after accounting for prior levels of health and well-being.²⁹

Persistent effects of systemic racism mean workers of color are more likely to face work-related challenges. In Massachusetts, Black and Latinx workers are more likely to be paid minimum wage than White workers — 29 percent of Black or African American workers, 36 percent of Hispanic or Latinx workers, and 18 percent of White workers are paid minimum wage.³⁰ Many of these lowest-paid workers are more likely to face income volatility³¹ or sexual harassment³² at the workplace — the latter of which is particularly likely to affect Black women and men at all income levels.

But ensuring all people have enough income to support themselves and their families goes beyond the workplace. Lawmakers can give people a boost through public programs like the **Supplemental Nutrition Assistance Program (SNAP)**, housing assistance, and publicly subsidized health care.³³

State policies help low-wage workers and their families lead healthy lives when raising the minimum wage or increasing supports like the Earned Income Tax Credit.³⁴ Massachusetts' increase to a \$15 per hour minimum wage by 2023 makes some progress in helping workers and families get closer to a living wage.³⁵ But there is room for the state to continue improving workers' well-being by passing laws to prevent wage theft, ensure employers assign fair and predictable work schedules, and other measures that are linked to better health.³⁶





Housing that provides a safe, stable foundation

Home is the foundation around which many people build their lives. It is the place where many people go to lay their heads down at the end of the day, share meals with loved ones, do homework, relax, and keep their belongings.

Good and stable housing can have a range of positive effects on people's health. These include warmth, safety, better sanitation, reduced stress, and better attendance at school or work.³⁷ Affordability of housing is also an important factor. Those who have to stretch their resources to afford housing often face making the impossible choice between paying their rent and buying food or necessary medications. In Massachusetts, a minimum wage worker would have had to work 91 hours per week to afford a modest, one-bedroom unit in 2019.³⁸

In the Commonwealth, soaring housing costs in a competitive market have put many families in dire circumstances. One in five renter households in Massachusetts pays half their income or more on rent.³⁹ Some workers are forced to live far from their workplaces or schools and spend hours commuting — more than 12 percent (405,000) of adult workers in Massachusetts travel an hour or longer to work.⁴⁰ This can affect health — not only through the stress that comes with long commutes and gridlock — but also because these workers have less time to see their doctors, less time to spend with their children, and less time to participate in community activities or engage in physical activity.

Further, the strained housing market affects students and older adults — who often rely on modest or fixed incomes and are hard-pressed to compete in the tight housing market.

The state plays a key role in providing housing and addressing homelessness by providing tax credits to build affordable housing, supporting the creation and preservation of public housing, ensuring tenant protections, regulating safety standards, and setting statewide zoning laws. Further, the state can provide solutions that can help alleviate the housing crunch through related issues like adequate wages, improved transportation networks, and others.

While there are several state programs to help the lowest-income people avoid or get out of homelessness, the funding for these programs has trailed behind current needs. The Massachusetts Rental Voucher Program (MRVP), for instance, supports less than half the number of vouchers it did in the early 1990s.⁴¹



Transportation that enables mobility and provides essential connections

Good roads and effective public transit not only get people to schools, jobs, grocery stores, and doctor's offices, but they are our links to sports games, places of worship, and other social connections vital to a healthy life. Further, safe bike lanes and pedestrian walkways can help people stay active while traveling to their destinations.

Management of traffic systems is also an important way to control the environmental pollutants a person is exposed to. Exposure to extremely fine particles from vehicle emissions (known as PM2.5) is the largest environmental health risk factor in the nation.⁴² In Massachusetts, about \$2.9 billion worth of health and climate costs in 2015 were attributed to passenger vehicles.⁴³

Communities can be designed to better enable healthy activities or discourage them. More than half of Massachusetts adults are at a weight that's considered unhealthy and almost a third have been diagnosed with high blood pressure.⁴⁴ People are better able to be physically active when their neighborhoods have good sidewalks, protected bike lanes, public transit, and a variety of uses — like parks, grocery stores, and homes— within walking distance.⁴⁵ Having diverse transportation options allow people with different needs — including older adults who no longer drive and people pushing baby strollers — to travel using whichever modes are most efficient for them.

Policymakers, public safety officials, and local leaders can help reduce barriers to physical activity for all Massachusetts residents by ensuring every neighborhood is connected to this infrastructure and that people feel safe to walk or cycle in their communities.

Improving daily commutes alone would require significant investment, and a lot of these investments are not in place.⁴⁶

While lack of investment in the Boston area's aging subway system has drawn the most public criticism, public transit outside Greater Boston continues to be limited. Funding for Regional Transit Authorities (RTAs) — bus and shuttle systems that serve suburban and rural towns and Gateway Cities — has stagnated in past years. Lawmakers funded RTAs at \$92.6 million for Fiscal Year (FY) 2020 — which is 1.7 percent more than its funding in FY 2016, adjusting for inflation.⁴⁷ This amount remains insufficient to enable transformative change at RTAs that would dramatically increase convenience and ridership.⁴⁸

Tackling Midstream Needs

While addressing upstream conditions beyond medical care is important, access to high-quality and affordable health care remains an indispensable part of a person's health. Massachusetts has for years led the nation in making sure every resident has health insurance.ⁱ But there remains room for improvement.

In Massachusetts, the health care system is in the midst of an ongoing effort to understand its role in addressing health beyond the doctor's office.

MassHealth (the combined Medicaid and Children's Health Insurance Program in Massachusetts), for instance, is incentivizing health providers to screen patients for **health-related social needs** — like housing instability, food insecurity, and unmet utility needs — and connect them with social services to help address these needs. New systems that coordinate care among multiple medical providers, known as Accountable Care Organizations (ACOs), served more than 147,000 people in Massachusetts in the fall of 2019.ⁱⁱ

In most ACOs, the health provider screens patients for health-related social needs, like food or housing security. Other ACOs work to connect such patients with social services, like food banks or elder services, to help address social needs affecting their health. MassHealth is beginning to roll out its Flexible Services Program,ⁱⁱⁱ which will help certain patients pay for health-related nutrition and housing services. These can include tenant assistance, home modifications to ensure safe housing, and meal deliveries to patients' homes.^{iv}

Recognizing the need to fund efforts to address health beyond hospital walls, Massachusetts lawmakers in 2012 created the Prevention and Wellness Trust Fund to help build sustainable financing of public health services. Through this fund, lawmakers dedicated \$57 million toward collaborations between clinics and community organizations to help prevent some of the most costly, prevalent, and preventable health-related social needs.^v The initial round of funding addressed childhood asthma, high blood pressure, tobacco use, injuries from falls among older adults, and other health issues.^{vi} Despite evidence of success and broad support for this fund, as well as its inclusion in bills by the Massachusetts House and Senate, it was not renewed in 2018 because a conference committee could not agree on a broad health care package at the conclusion of its previous legislative session.

As health care providers and providers of social services strive to bridge their work towards improving health, they face several challenges. These include the need for better data systems, the need for resources to properly meet people's needs, and the culture shift required to integrate with different sectors. This program has encouraged Massachusetts providers to look beyond hospital walls when considering effective ways to address health.^{vii}

Health providers have taken important steps toward addressing health-related social needs — like referring high-needs patients to food pantries and agencies that help them find housing — but these do not tackle the upstream causes of poor health, such as the lack of available affordable housing units or even more upstream social and economic issues like poverty and discrimination. Truly addressing these upstream social determinants means changing the context in which all people live.

One way to move upstream is through legislation on issues like tenant protections, affordable housing, access to healthy food that's affordable, access to good education, access to good jobs, and efforts to allow people to move out of poverty. There are myriad opportunities for health care providers — key economic drivers in the state — to move the needle on ensuring that, in Massachusetts, health is not determined by race, gender, zip code, or other factors.

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Healthy Investments Require Healthy Revenues

The health of a community is not the sole responsibility of nurses, doctors, and emergency responders. Conditions beyond hospital walls — like housing, the environment, and transportation — have a profound effect on our health. These conditions are shaped in part by the state's budget. And supporting these investments requires a healthy stream of revenue, the largest portion of which is likely to be from taxes.

Over time, funding for many items in the state budget has stagnated or been cut. This is in part because of tax cuts in the late 1990s and early 2000s that today mean more than \$4 billion in revenue losses per year for Massachusetts.⁴⁹

The state needs revenue to meaningfully invest in policies and programs that help shape social determinants of health. But, in raising additional revenue, state lawmakers can use mechanisms that do not worsen health inequity. In Massachusetts' upside-down tax system, people with the least income pay the largest portion of it in taxes. These **“regressive” tax** systems can further entrench racial and ethnic inequities. The ongoing legacy of systemic racism means Black and Latinx taxpayers in Massachusetts tend to have lower incomes and less wealth than White households and therefore tend to pay larger percentages of their incomes in taxes.⁵⁰

State lawmakers can establish policies that raise revenue without exacerbating inequality.

Lawmakers can apply a surtax on top incomes, surtaxes on large mansions and condominiums, and eliminate certain business tax breaks, among others.⁵¹ These measures would generate revenue for programs that help shape where we live, work, and play.

If Massachusetts is to continue leading the nation in health and health care, then our revenues and state budget will be central to supporting the programs and services that will help ensure every person can flourish.



Glossary of Terms

Food insecurity: Lack of consistent access to enough food that is healthy, often because of a lack of available financial resources and/or lack of accessible food options.

Health: A state of complete physical, mental, and social well-being.

Health equity: In an equitable society, no facet of a person's identity — like race, class, gender, ability, sexual orientation, and nationality — should predict well-being. Health equity is the absence of differences in health that are unnecessary, unfair, and unjust. Unlike equality (which calls for equal treatment of everyone), equity calls for a society that accounts for each person's unique starting point.

The Boston Public Health Commission illustrates the difference between equity and equality using an analogy where everyone in a large group is given a size nine pair of shoes. Every person may be happy to receive free shoes, but only a few people in the group are size nine. Most people could not wear the shoes. Everyone was treated equally, but the result was inequitable.

Health equity means every person has the opportunity to thrive, which can require removing obstacles to health such as discrimination, unsafe environments, lack of access to good jobs, and social isolation.

Health-related social needs: The social needs of an individual or family that affect their health, such as asthma triggers in a family's home or a person's access to healthy foods. Some health providers are beginning to screen patients for these health-related social needs, but addressing these does not change the root causes or the conditions in which the community lives. "Social determinants of health" are considered upstream, while health-related social needs are considered midstream.

Housing insecurity: Lack of access to housing that is affordable, safe, of good quality, and consistent. The reasons for this are often complex and can be underpinned by high housing costs and the lack of access to available financial resources to pay for housing.

Poverty: Poverty is officially described as when a family's income fails to meet a federally established threshold that determines what amount of money a family needs to afford basic needs. This economic description, however, does not account for what a family's quality of life is relative to other members of its society. Poverty increasingly is considered social, political, and cultural. It is considered to undermine human rights.

Regressive taxes: Taxes that ask people with low or modest incomes to pay a larger percentage of their incomes than taxes on people with higher incomes do.

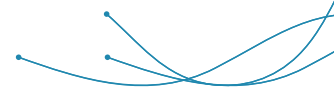
Supplemental Nutrition Assistance Program (SNAP): A federal program that helps residents with low incomes purchase healthy foods. While SNAP is primarily a federal program, Massachusetts funds a small supplement through the state budget.

Social determinants of health: The conditions in which people are born, grow, live, work, play, and age. These conditions are shaped by the distribution of money, power, and resources. Social determinants can be viewed as "upstream" conditions that shape "downstream" health outcomes (like life expectancy, infant mortality rates, and chances of suffering from chronic diseases). Social determinants of health are not things a person can have or avoid; they affect everyone.

Systemic racism: The complex ways in which historical oppression, culture, and ideology interact through politics, economic systems, public policies, and institutional practices to reproduce and reinforce discriminatory treatments and outcomes that systematically advantage White people and disadvantage people of color. Systemic racism includes but is not the same as individual or interpersonal racism.

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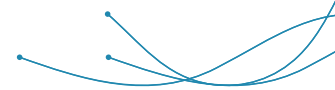
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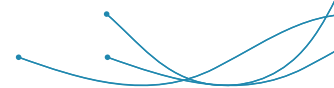
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