Achieving Racial and Health Equity: Strengthening Milwaukee County's Public Health Infrastructure

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Mobilizing Action Toward Community Health (MATCH)

University of Wisconsin Population Health Institute

SCHOOL OF MEDICINE AND PUBLIC HEALTH

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Executive Summary

Milwaukee County administrators commissioned the Wisconsin Policy Forum to lead a research project to examine the current structure for public health service provision in the county and possible opportunities for improvement. The University of Wisconsin Population Health Institute Mobilizing Action Toward Community Health (MATCH) Group was subcontracted to write this complimentary report focused on the public health infrastructure's role in advancing racial and health equity in the County.

Everyone deserves a fair and just opportunity to thrive, to be physically, financially, and emotionally healthy. Achieving this universal goal requires understanding that public health research has shown clearly that over 50% of our health outcomes are the result of social, economic, and environmental factors. In other words, the neighborhoods and the housing we live in, the jobs we hold and the pay and benefits we receive, the schools we attend, the air we breathe and the water we drink, and many other similar factors have a huge impact on our health. This means that, for everyone to thrive, public health agencies must work with others to ensure our neighborhoods, housing, jobs, schools, and environments are as health-promoting as possible.

Among the social factors that contribute both directly and indirectly to our health outcomes are various forms of racism (e.g., interpersonal, internalized, institutional, and systemic), as well as other forms of discrimination. Racism directly impacts our health by literally getting under our skin; research shows that racism is experienced as chronic stress, which in turn has physiological impacts. Racism also impacts our health structurally: our current day housing, employment, education, incarceration, environmental, and transportation context has clear racialized outcomes as a result of present day institutions and structures created by our history and our past decisions. Milwaukee has been described as 'hyper-segregated', with the vast majority of Black people living in the urban core and the suburban areas populated primarily by white people. This hyper-segregation has had tremendous impacts, leading to the inequitable distribution of resources and opportunity by race across social, economic, and environmental factors, and through those, on health outcomes. The patterns on historic redlining maps in the county are reproduced in maps of current health outcomes. For everyone to thrive, then, public health agencies must address structural racism and other forms of discrimination.

Milwaukee County's racialized history has shaped its governmental public health infrastructure. Primarily white suburbs grew in response to African American migration into the city. While the majority of counties in Wisconsin have one county health department, there are 11 local health departments in MIlwaukee County. Local municipal health departments have the benefit of tailoring their focus around the nuances of their community, however those benefits are challenged by minimum requirements for each health department, fragmentation across county resources, and not being able to pool shared expertise and take advantage of public health systems approaches that would have greater impact at the county level. Public health has long known that drivers of disease do not stop at jurisdictional borders and therefore effective public health interventions need to cross municipal lines, agencies, and sectors. COVID-19 has demonstrated this reality many times over. Public health is defined as "what we, as a society, do collectively to assure the conditions in which *all* people can be healthy." For everyone to

thrive, we must rethink the fragmented structures rooted in a racialized past that have created and maintained conditions under which no one can attain optimal health and that make it impossible for governmental investments and efforts to be maximized.

Interviews with Public Health Officers within Milwaukee County indicate that most, if not all, of them understand that they need to work on the social, economic, and environmental factors that affect health, that they must work to address racism, and that they need to better coordinate. They understand that the current structure of the public health system limits what they can do and, therefore, everyone's ability to be as healthy as possible.

Through the collection of data for this project - the interviews, mapping of health outcome data, discussions with the steering committee, and the review of Milwaukee's history - a set of potential opportunities for increasing collaboration across public health departments emerged that would advance health and racial equity:

Opportunity 1: Develop a county-wide plan, based on Public Health 3.0 principles and health equity, that identifies a set of common priorities and coordinates work on those priorities.

Opportunity 2: Create, fund, and staff a county-wide Health in All Policies initiative.

Opportunity 3: Build upon existing racial justice work by continuing outreach and education, moving public health, elected officials, and others toward a deeper understanding.

Opportunity 4: Improve availability of sub-county data as well as finer grain data disaggregated among socially disadvantaged population groups, both accompanied by context that brings forward past and present assets and barriers.

Opportunity 5: Provide training and capacity building opportunities around health and racial equity for all the public health departments, as well as opportunities to continue to share with each other about racial equity initiatives.

Opportunity 6: Engage and build trust with community groups that work with people most impacted by health and racial inequities, and identify sources of funding to support their work.

Opportunity 7: Create mechanisms to share resources that are helpful across jurisdictional boundaries.

Each of these opportunities is explained further below and it is recommended that practical action plans for each are developed.

We have the knowledge, resources, and the power to enact policy and practice solutions that address structural racism and create a community in which everyone can thrive. Improving the coordination of the public health infrastructure in the county is a crucial component of making Milwaukee the healthiest county in Wisconsin. These identified opportunities focus on the underlying causes of poor health outcomes and on advancing health and racial equity, both of which are critical for improving the health and wellbeing of all residents in the county, together.

Acknowledgements

We greatly appreciate the support and contributions of many people and organizations in developing this report:

- The Milwaukee County Executive's Office and Isaac Rowlett, the Strategic Planning Director
- The Wisconsin Policy Forum
- The Project's Steering Committee
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Introduction

Milwaukee County administrators commissioned the Wisconsin Policy Forum to lead a research project designed to examine the current structure for public health service provision in the county and possible opportunities for improvement. The UW Population Health Institute Mobilizing Action Toward Community Health (MATCH) Group was subcontracted to write this complimentary report focused on the role of the public health infrastructure in advancing racial and health equity in Milwaukee County.

Our scope included a broad review of the effectiveness of public health programming and services in Milwaukee County, viewed particularly through a lens of health equity.

This report begins by providing a brief racial history of Milwaukee County, followed by Census tract level maps of demographics, health outcomes, and social determinants of health in the County (with additional maps presented in Appendix A). It then summarizes findings from interviews with Health Officers from most jurisdictions in Milwaukee County. The report presents an initial set of opportunities gleaned from this initial research and suggestions for next steps, followed by a discussion and concluding remarks.

Everyone deserves a fair and just opportunity to be physically, financially, and emotionally healthy, but our current systems and structures deny that opportunity to too many people. Understanding that current health outcomes are the result of past - and current - decision making is critical because it shows us the path we've been on and informs how we can take a different path forward, toward a future in which racial and health inequities have been eliminated. As a society, we have a long history of racialized decision-making that has exacerbated deep health and racial inequities. The people of Milwaukee County can make a different set of decisions now, ones that could lead to a reduction in health inequities. We have the power to create a different future, starting with decisions we make today.

The COVID-19 pandemic has not only reminded us of how much we need each other, but also how much we can accomplish together. People move throughout the county, for work, school, to access resources, and for fun; our well-being is bound to each other. Milwaukee County residents and leaders can come together to prioritize investments that close gaps in resources and opportunities across groups and ultimately improve the lives of all residents across the county.

To be sure, doing so is the role of governmental public health. The Institute of Medicine specified public health's mission as "fulfilling society's interest in assuring conditions in which people can be healthy." More recently, the IOM reminded us:

> The government's role in fulfilling this mission was described in terms of three core functions of public health practice: assessment of health status and health needs, policy development, and assurance that necessary services are provided. States were considered to have primary public responsibility for health, but it was considered essential that residents of every community have access to public health protections through a local component of the public health system. The public health obligations of

> the federal government included informing the nation about public health policy issues, aiding states and localities in carrying out their public health functions in a coordinated manner, and setting national health goals and standards.

We have the knowledge, resources, and the power to enact policy and practice solutions that address structural racism and create a community where everyone can thrive. The findings of this report - and the Wisconsin Policy Forum's report - will be considered by a stakeholders' group formed by Milwaukee County leaders to consider not only potential structural changes to public health services in the county, but also additional steps required to address health and racial disparities and improve health outcomes.

Taken together, these efforts contribute to research to inform stakeholders and policymakers decision making on specific new collaborative models and strategies that can enhance public health services and coordination in Milwaukee County.

A brief racial history of Milwaukee County

Milwaukee County is home to Wisconsin's largest city, the City of Milwaukee. The County, located on Lake Michigan, is rich in resources, history and culture. The County sits on the ancestral lands of the Menominee, Fox, Mascouten, Sauk, Potawatomi, Ojibwe, and Ho-Chunk people. Today the City of Milwaukee is a global city, and one of the most ethnically and culturally diverse cities in the United States.

Overall, the County has been prosperous, and while communities are fiercely resilient, stark inequities exist across the County. This report describes some of the tremendous health inequities within Milwaukee County, including for example, a shocking 23 year difference in life expectancy between Census tracts within the county. Because many people have traditionally focused on individual behaviors, like smoking, as well as the healthcare system to explain health outcomes, it is important to set some context for the health outcomes observed in the county.

In recent decades public health research has shown clearly that over 50% of our health outcomes are the result of social, economic, and environmental factors (CHRR). In other words, the neighborhoods and the housing we live in, the jobs we hold and the pay and benefits we receive, the schools we attend, the air we breathe and the water we drink, and many other similar factors have a huge impact on our health. For example, housing is tied to health through housing quality (e.g., dry, clean, ventilated, pest- and contaminant-free housing is healthier), affordability (e.g., living in affordable housing allows people to pay for other needs, such as utilities, food, and medical care), and location (e.g., access to transportation, parks, quality schools, healthy food and good jobs leads to better health) (Pew). Similarly, employment is tied to health through income (e.g., higher wages allow people to buy healthy food, live in better housing in neighborhoods with access to necessary services, and afford healthcare), benefits (e.g., health insurance and paid sick time), stability (e.g., job security leads to less anxiety and better mental health), and safety (e.g., some jobs are in environments that have health and safety hazards and require tasks that can cause physical harm) (Pew).

Among the factors that contribute both directly and indirectly to our health outcomes are the various forms of racism (e.g., interpersonal, internalized, institutional, and systemic), as well as other forms of discrimination. Racism directly impacts our health by literally getting under our skin; research shows that racism is experienced as chronic stress, which in turn has physiological impacts (Greenberg 2020). The body's normal 'fight or flight' response for emergencies is triggered continuously as a result of chronic stress, leading to high levels of stress hormones, which, in turn, leads to high blood pressure, impaired glucose metabolism, immune dysfunction, and other physical effects. That overtaxing of the body, in turn, impacts the immune, endocrine, and circulatory systems, causing significant wear and tear, and leading to illnesses such as hypertension. This dysregulation of and damage to the body has been named 'allostatic load.'

Racism also impacts our health structurally. In other words, our current day housing, employment, education, incarceration, environmental, and transportation context has clear racialized outcomes as a result of present day institutions and structures created by past decisions. Milwaukee has been described as 'hyper-segregated', with the vast majority of Black people living in the urban core and the suburban areas populated primarily by white people (Fernandez 2020; and see the demographic maps later in this report). This hyper-segregation has had a tremendous impact on social, economic, and environmental factors, and through those, on health outcomes (Williams 2001).

Present day segregation and other manifestations of structural racism are the result of historical events and decisions in Milwaukee, in Wisconsin, and nationally. While it is beyond the scope of this report to comprehensively review this history, we provide some examples to help set the context for our findings.

Population shifts

Over time, the racial and ethnic composition of Milwaukee has shifted. The land was originally populated by Native American tribes, including the Potawatomi, Ojibwe, Odawa (Ottawa), Fox, Ho-Chunk, Menominee, Sauk, and Oneida (Rindfleisch 2016). The first European settlement was established in 1785. The Potawatomi signed away their land through the Treaty of Chicago in 1833, a decision that resulted from hostility from white people, a declining fur trade, and divisions among Native leaders, often inflamed by U.S. agents (Rindfleisch 2016). The U.S. government then created townships and started selling land at low prices, and many white pioneers started immigrating to the area.

Throughout the late 19th Century and early 20th Century, Milwaukee remained an overwhelmingly white city. This period witnessed successive waves of immigration to Milwaukee from British, Irish, German, Polish, Italian and other communities (Anderson 2016). The divisions between these groups were often fierce, with communities forming separate neighborhoods, political parties, and communal infrastructure (Efford 2016). In 1863, the state assembly considered outlawing in-migration by African Americans (Morrell 2021).

The presence of BIPOC[1] communities began to grow in Milwaukee in the 1950s. The Black population began to grow rapidly then in the urban core as a result of a late Great Migration from the South and the availability of jobs (Smith 2016). The city of Milwaukee's Black population grew steadily since then and now is 39% of the total population (US Census). The total population of the county peaked around 1970 and, from then until about 2000, a significant amount of the white population shifted to the suburban areas of the county (Fernandez 2020, Smith 2016), what many call 'white flight' (e.g., MacGillis 2014). More recently, the Latinx[2] population in the city of Milwaukee has grown to make up about 19% of the population, from about 4% in 1980 (US Census).

In the suburbs of the county 83.5% of the population in 2010 was white (calculated based on US Census data).

History of the Milwaukee Municipalities

A few patterns that stand out:

- There was a wave of municipalities that incorporated around the turn of the 20th century. This was primarily driven by overcrowding and the desire for a healthier living outside of the city center.
- Later, there was a wave of cities that expanded or were formed in the 1950s, again driven by fears of overcrowding but also more explicitly by racial and political tensions with the city of Milwaukee.

Separation from the City of Milwaukee in earlier eras was predicated on a partisan and racial difference between the suburbs and the city, a difference that on both fronts has lessened somewhat in recent years as the suburbs have gotten more racially diverse.

Municipality Demographic Information

To help visualize the demographics of the Milwaukee County municipalities, the table below was created. This pulls data from the Census Quickfacts for population and racial demographic numbers. While we attempted to be consistent in presenting the same data, it was not always possible given the source did not always have the same information available.

Municipality	***Demographics***	
Cudahy	1990	95% non-Hispanic White
	2010	The Latinx population grew especially quickly and represents 9.7% of the population. The Black population also grew to 2.7% of the community.

[1] BIPOC stands for Black, Indigenous, People of Color.
[2] Latinx is a gender-neutral term for Latino/Latina.

	Overall	The population has declined over the last 30 years from: ● 19,547 in 1980 ● 18,267 in 2010
Franklin	1980	96% non-Hispanic White
	2010	Communities of color grew in the city. At this time Black, Asian and Latinx communities each represent about 5% of Franklin's population.
	Overall	The population has more than doubled, going from: ● 16,000 in 1980 ● 35,000 in 2010
Greendale	2000	95% non-Hispanic White
	2010	There has been small but significant growth of communities of color. At this time, the city was 1.2% Black, 3.1% Asian American and 4.7% Latinx.
	Overall	The population has steadily declined from: ● 17,000 in 1980 ● 14,000 in 2010
Greenfield	1990	95% non-Hispanic White
	2010	The city's Latinx population had grown to more than 8%, Asian population to 4% and the Black population was 2%.
	Overall	The population had steadily grown from: ● 31,000 in 1980 ● 37,000 in 2010
Hales Corners	2000	95% non-Hispanic White
	2010	Though still more than 90% White, by the Latinx population had grown to 4% of the city.
	Overall	The population has remained steady from: ● 8,000 from 1990 to 2010
Milwaukee City	19th and early 20th centuries	Predominately white city

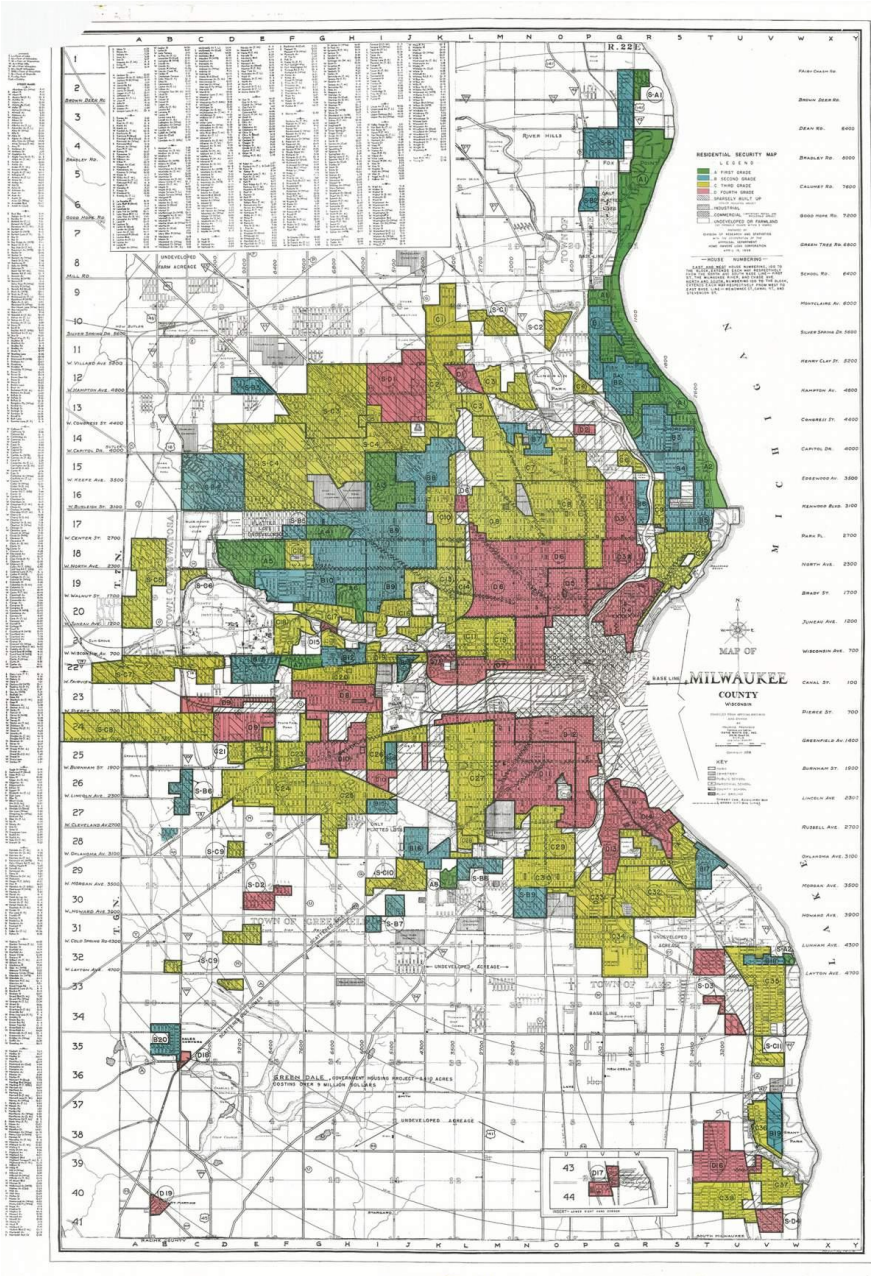
	1920s-1930s	While economic development and the Great Migration brought small Black communities to Milwaukee, the Black population of Milwaukee never rivalled that of Chicago or Detroit during this time (Smith 2016).
	1950-1960	Milwaukee's Black population grew rapidly. From 1950 to 1960 the Black community nearly tripled (Smith 2016).
	1980	23% of the population was Black
	2010	40% of the population was Black, 17.3% Latinx and 3.5% Asian American
	Overall	The last 40 years have seen the continued growth of the Black community as well as newer Latinx and Asian American communities. The population has steadily declined largely due to White people moving to suburbs and other communities.
North Shore	1990	All municipalities were more than 90% non-Hispanic White.
	2010	While each municipality has undergone demographic shifts in the last decades, they have been of considerably different scopes. Whitefish Bay, Fox Point, and Bayside are still nearly 90% White, while in Glendale and River Hills communities of color now represent 20% of the city and in Brown Deer, that number is nearly 40%.
	Overall	This area covers seven municipalities ranging in size from less than 2000 (River Hills) to 14,000 (Whitefish Bay).
Oak Creek	1990	95% non-Hispanic White through 1990
	2010	Oak Creek saw growth in communities of color. In 2010, Oak Creek was 2.8% Black, 4.5% Asian American, and 7.5% Latinx.
	Overall	Oak Creek has also seen its population double, growing from: ● 17,000 in 1980 ● 34,000 in 2010
South Milwaukee	2010	There has been a somewhat significant racial demographic change in the community. Most notably, the Latinx population has doubled every Census and accounted for 8% of the city in 2010. The city's Black and Asian populations have also grown and represent 2% and 1% of the city respectively.
	Overall	South Milwaukee's overall population (~21,000) has remained flat over the last several decades.

St. Francis	2010	The communities of color in St. Francis have doubled in nearly every census. In 2010, the city was 9.4% Latinx, 2.7% Black, and 2.1% Asian American.
	Overall	The population declined significantly, then grew again from: ● 10,000 in 1980 ● 8,600 in 2000 ● 9,400 in 2010
Wauwatosa	1990	95% non-Hispanic White
	2010	The city has seen small but significant growth in its communities of color. In 2010, the city's Black population had grown to 4.5%, its Latinx and Asian American populations both grew to 3%.
	Overall	The population has steadily declined from: ● 51,000 in 1980 ● 46,000 in 2010
West Allis	2010	The city's communities of color have grown significantly, especially its Latinx population which nearly tripled from 2000 to 2010. Today the city is 9.6% Latinx, 3.6% Black, and 2% Asian American.
	Overall	The population has declined slightly over the last several decades: ● 64,000 in 1980 ● 60,400 in 2010

Housing

Segregation in Milwaukee was the result of a number of policies and practices. In the 1930s, the Federal Housing Administration worked with the Home Owners' Loan Corporation to create color-coded maps indicating areas that were high or low risk for investment. Banks then used these maps to decide where they would give loans for housing purchases. The red areas of these maps were neighborhoods in which people of color lived and HOLC's evaluators considered these unsafe investments as a result of racist beliefs; these areas were "redlined". The language used by evaluators was blatantly racist by today's standards; one map says, for example, "This is the Negro and slum area of Milwaukee. Besides the colored people, a large number of lower type Jews are moving into the section" (Foltman 2019). On the other hand, areas that were viewed as safe investments were those that were "highly protected and restricted" and permit "a wide latitude of discrimination in accepting residents into the neighborhood" (Foltman 2019). The redlining map of Milwaukee is shown below.

Redlining led to white people being able to obtain loans, purchase housing, and accumulate wealth that has most often grown significantly over time. Black people and other people of color, on the other hand, were not able to obtain loans, purchase homes, and accumulate wealth. Predominantly Black neighborhoods were not invested in, as a result, and this led to a decline in infrastructure and housing stock. Racial maps of Milwaukee today still strongly reflect the original redlining maps (Foltman 2019; and see the demographic maps later in this report).



Racial covenants were written to ensure that Black people could not live in the Milwaukee suburbs. Into the 1940's, 16 of 18 suburbs in the county had such covenants, making it illegal for Black people to live in them except when they were servants of a white family (Fernandez 2020). More than 90% of the county was covered by such covenants (Morrell 2021). For example, one such covenant written in 1919 read "At no time shall the land included in Washington Highlands or any part thereof, or any buildings thereon be purchased, owned, leased, or occupied by any person other than of the white race. This prohibition is not intended to include domestic servants while employed by the owner or occupant of any land included in this tract." (Jackson 2020)

A number of other policies and practices created or deepened segregation, including for example:

- Blockbusting: The practice of real estate agents of convincing white property owners to sell their property cheaply after the real estate agents sowed fear that Black people were moving into the neighborhood and that home values would decline, and then profiting by reselling those properties at a higher price. Blockbusting was based on and perpetuated the idea that Black people would adversely affect a community.
- Racial steering: The practice of real estate agents of guiding prospective home buyers towards or away from neighborhoods based on their race.
- Zoning: Municipalities' use of zoning ordinances to make it more difficult for some groups of people to live in a community, for example by creating minimum lot sizes to drive up the cost of housing and thus prevent Black people, who were often poorer than whites, from moving in.
- Opposition to affordable housing requirements and public housing: Residents and elected officials often protest(ed) the locating of public housing in their communities and oppose(d) requirements to build affordable housing.

Together these government policies and individual practices led to the hyper-segregation we see today within the county. Mapping reveals that those areas of the city that face the worst health outcomes today are those that were originally redlined (Godoy 2020).

Employment

Today, the City and County of Milwaukee serve as an economic engine for the state of Wisconsin (Shepard Express Editorial Board 2017), with several industries standing out: Energy, Power & Controls; Food & Beverage Manufacturing; Water Technologies; Manufacturing; Finance & Insurance; Medical Technology; Information Technology; and Consumer Products (Milwaukee 7). The benefits of this economy have not, however, been distributed evenly along racial lines.

In the late 1800's, the equipment manufacturing, textile, leather, and metal-bending industries in Milwaukee began to expand rapidly. By the early 1900's, the city was a major industrial center (Orum 2016). Like similar cities, it experienced the bust of the Great Depression and the boom during World War II. But just as the Black population was increasing, and with over 40% of Black people employed in these blue-collar jobs (Jackson 2019), the city lost 42,000 manufacturing jobs between 1960 and 1973 (Orum 2016) - and continued losing jobs through the end of the century. Between 1970 and 1990, on

the other hand, the county's suburbs gained 100,000 industrial jobs (Smith 2016). Thus, there is now a spatial mismatch between where jobs are located (in the suburbs) and where many people live (in the city). Recent studies have found that 96.3% of men employed in suburban manufacturing jobs are white (Smith 2016). This has resulted in massive unemployment for Black men in the city; while in 1970, nearly 74% of Black men in Milwaukee were employed, by 2009 only 46.7% were.

Bronzeville and urban renewal

Despite the dynamics described above, the Black community in the City of Milwaukee has a history of vibrancy. For example, the Bronzeville neighborhood - where most of the Black population was forced to live (Morrell 2021) - was tight knit and self-sufficient, with a strong commercial corridor and a thriving night-life and jazz scene, as well as churches and sports (City of Milwaukee 2019). Under the banner of 'Urban Renewal', though, between the mid-1960's to the 1980's, the city tore down 7,500 houses in the urban core and 'redeveloped' the area (O'Farrell 2016), displacing residents and disrupting the Bronzeville community. This included building Interstate 43 through the heart of Bronzeville (City of Milwaukee 2019).

Public Education

Given the housing segregation described above, it is no surprise that public (and private) schools have been and, despite efforts, continue to be highly segregated as well. As the *Milwaukee Journal Sentinel* reported in 2014, "One in three MPS students today attends a school that is intensely segregated, defined as any school with an enrollment that is at least 90% one race. Nearly 20 years ago, that number was far smaller: less than one in 8 students." (Richards and Mulvany 2014). Voluntary busing programs in the 1970's, lawsuits in the 1980's to create school districts that cross urban/suburban boundaries, and more recent 'open enrollment' laws that allow students to attend school in any district that will take them have all failed to fully integrate Milwaukee area schools (Nelsen 2016). As the suburbs become more racially and ethnically diverse, public schools may (or may not) follow suit.

Almost half of school funding comes from local property taxes (Liebergall 2020). As described above, redlining led to disinvestment in Black communities and, therefore, lower home values in those communities. This translates, today, into a lower property tax base and lower property tax revenue in Black communities, which results in schools in lower-income and predominantly Black communities in the urban core receiving less funding on a per-pupil basis than suburban schools with mostly white students. This segregation and funding imbalance contribute to the huge achievement gap between the city's Black and white students (Lisowski 2018).

Policing and incarceration

Wisconsin's incarceration rates for Black men are the highest in the country (Corley 2013) and more than half of Black men in their 30's and 40's in Milwaukee County have served time (Downs 2015). A 2013 study from the University of Wisconsin-Milwaukee found that "The prison population in Wisconsin has more than tripled since 1990, fueled by increased government funding for drug enforcement (rather

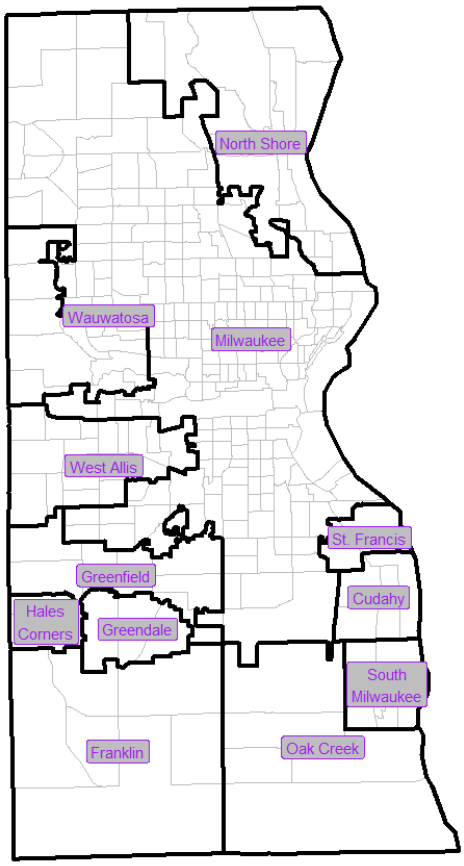
than treatment) and prison construction, three-strike rules, mandatory minimum sentence laws, truth-in-sentencing replacing judicial discretion in setting punishments, concentrated policing in minority communities, and state incarceration for minor probation and supervision violations." (Jackson 2019) In other words, as good jobs left for the suburbs, criminal justice policies became harsher and more Black men were caught up in the system. Incarceration itself leads to poor health outcomes, and the racialized nature of the criminal justice system therefore leads to racial health inequities (Braveman 2018).

In combination, the segregation, lack of employment, and poor education outcomes described above contribute to a sense of lack of opportunity, safety, and security for Black families in Milwaukee and to over-policing in Black neighborhoods and high incarceration rates. Each of these individually contributes to poor health outcomes, and the mix of them all greatly amplify the health inequity.

Metrics of Health Outcomes

On the following pages, we present maps of demographics, health outcomes, and social determinants of health in Milwaukee County (with additional maps presented in Appendix A). Data is mapped at the Census tract level where possible, and at the jurisdictional level where data is not available at the Census tract level. Note that St. Francis and South Milwaukee are served by a joint health department.

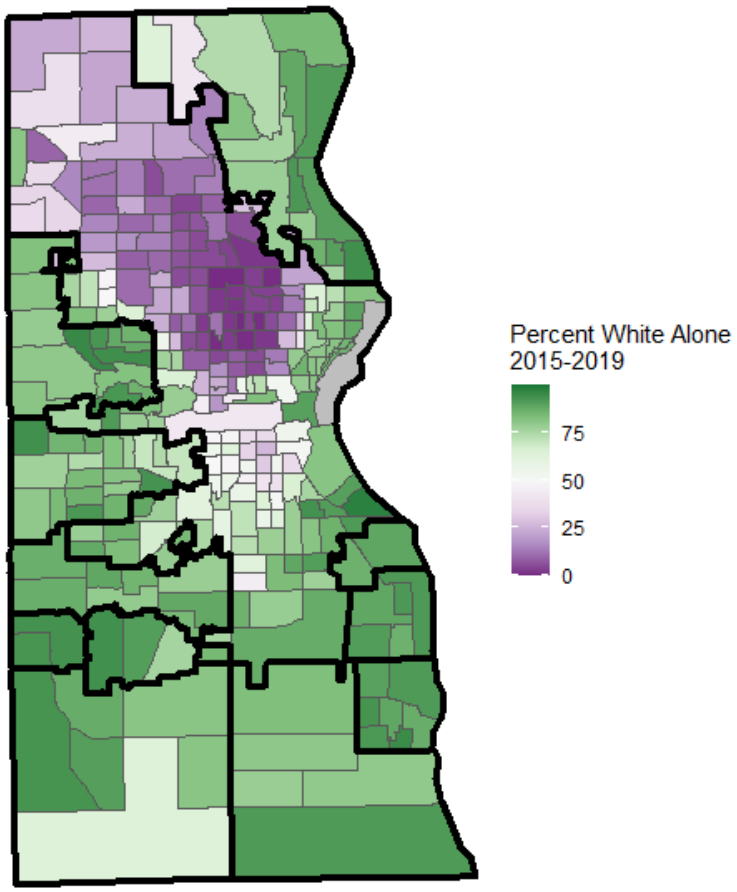
Local Health Department Jurisdictions in Milwaukee County



Demographics

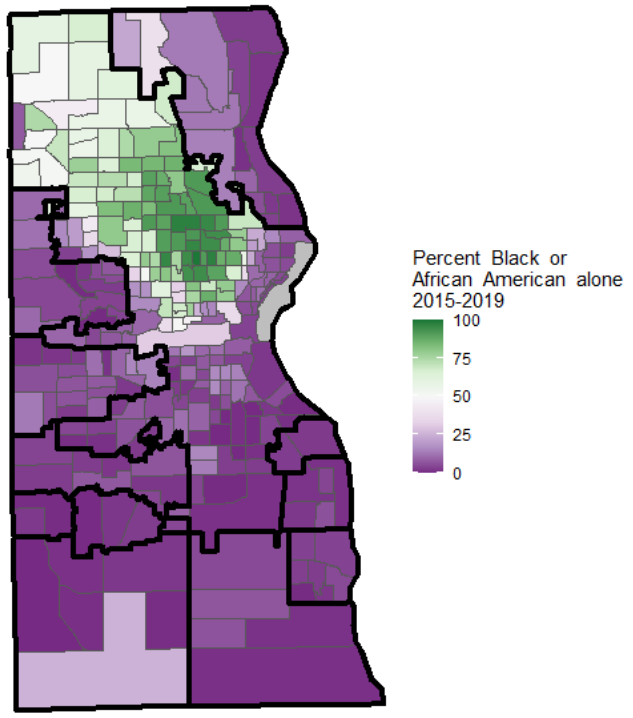
Racial and ethnic population groups are highly segregated across jurisdictions. A majority whilte population is represented in all jurisdictions but the City of Milwaukee, where Black and Hispanic populations are most represented. The geographic patterns in these maps (and several others below) are similar to the geographic patterns in the redlining maps shown in the housing section above.

Percent White



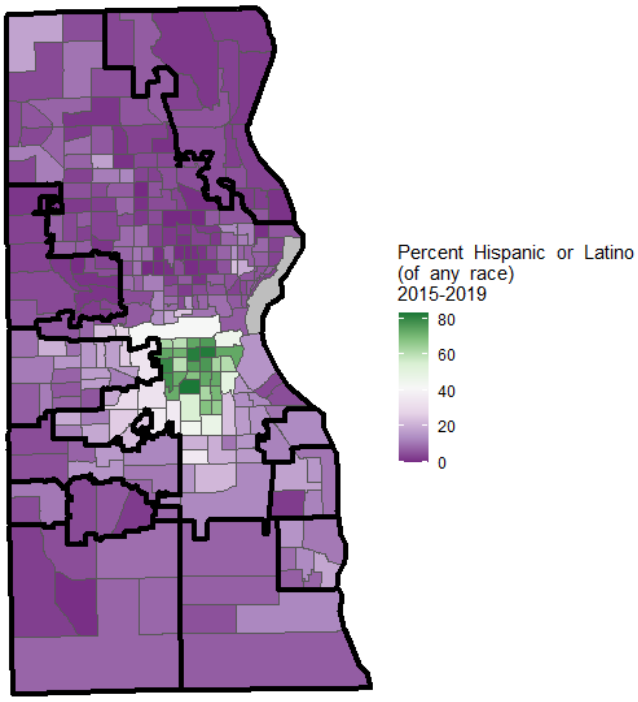
Source: ACS

Percent Black



Source: ACS

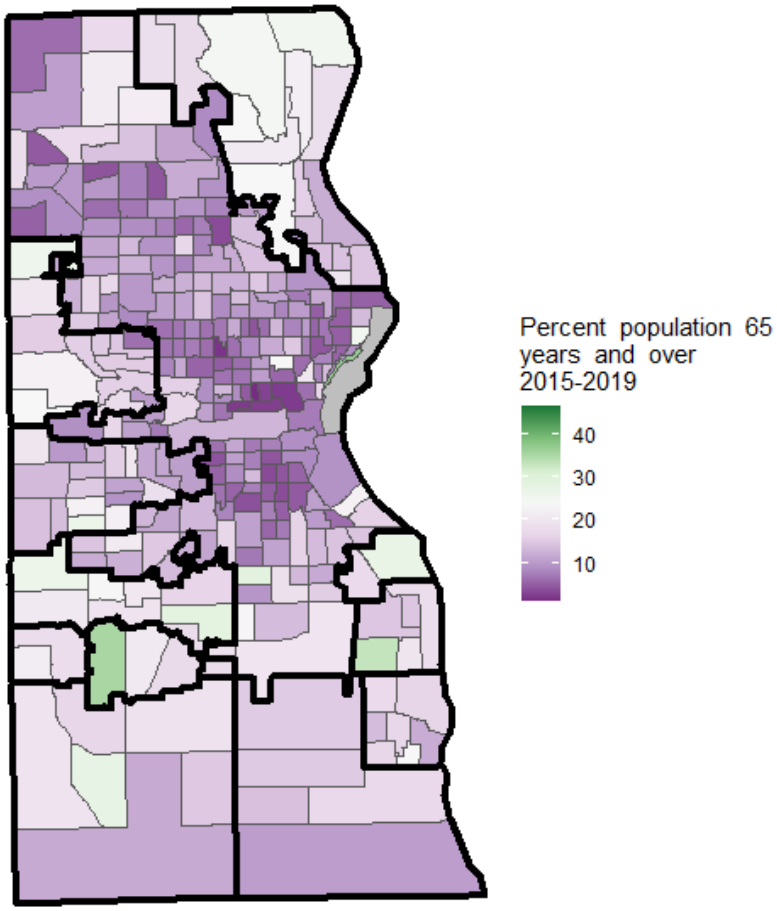
Percent Hispanic or Latino



Source: ACS

Across all jurisdictions, there are similarities in the share of the population age 65 and older. The City of Milwaukee has a smaller share of seniors relative to other jurisdictions. Nearly 1 in 5 adults is age 65 or older.

Percent 65 and Older

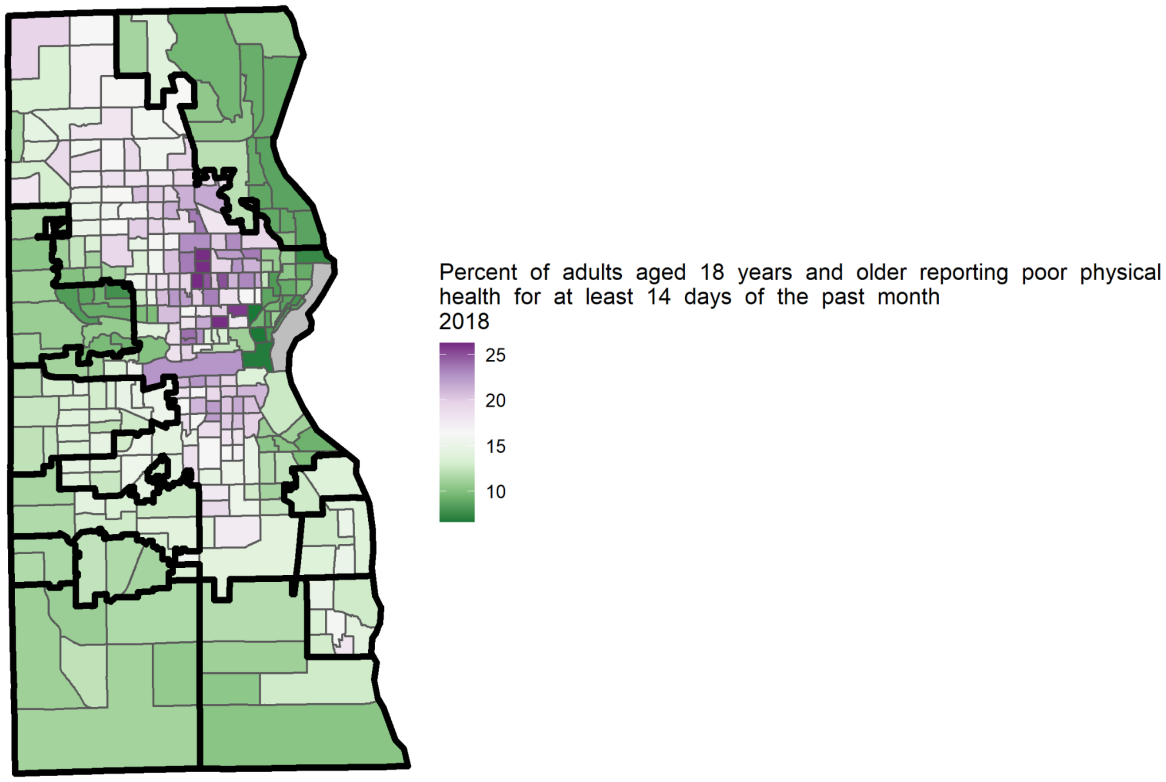


Source: ACS

Health outcomes

Across jurisdictions, there are similarities in the share of the adult population reporting poor physical health for at least 2 weeks of the past month (approximately 13%). Variation exists among census tracts within jurisdictions, with the most variability in adults reporting poor physical health within the City of Milwaukee (range 6% to 26%).

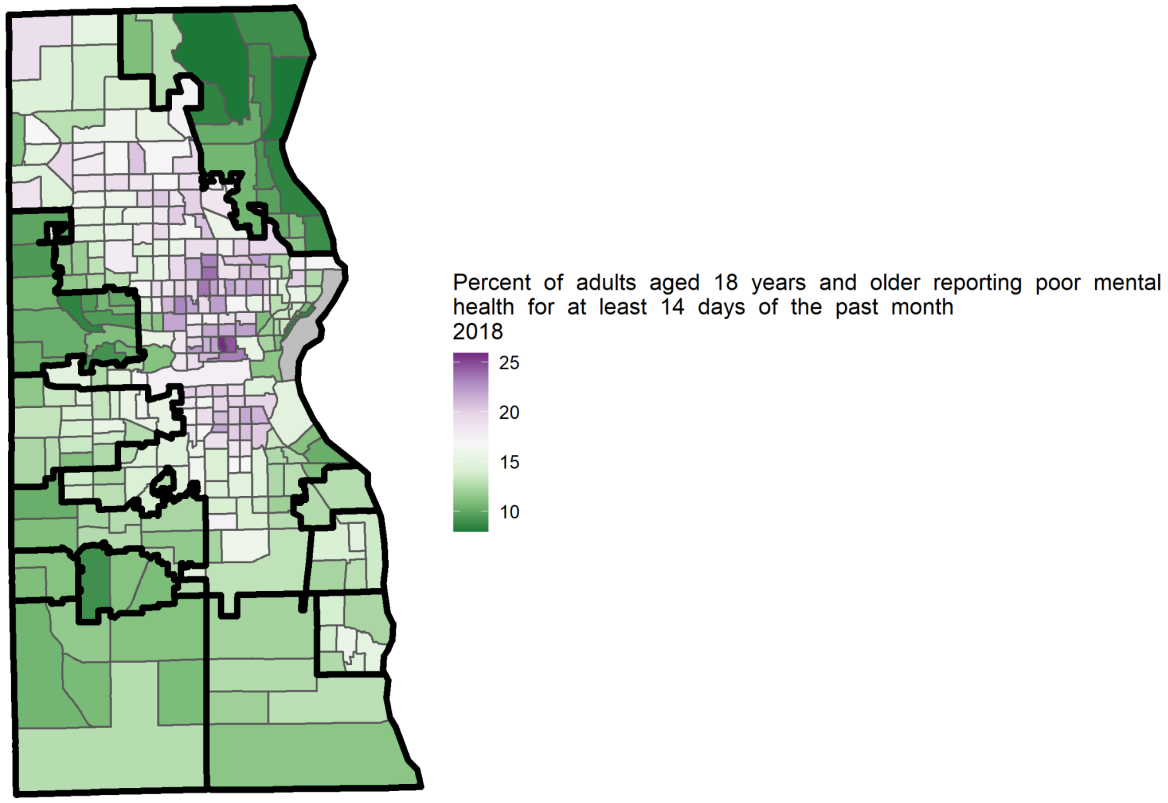
Poor Physical Health



Source: BRFSS

Across jurisdictions, there are also similarities in the share of the adult population reporting poor mental health for at least 2 weeks in the past month (approximately 13%). Variation exists among census tracts within jurisdictions, with the most variability in adults reporting poor mental health within the City of Milwaukee (range 9% to 26%)

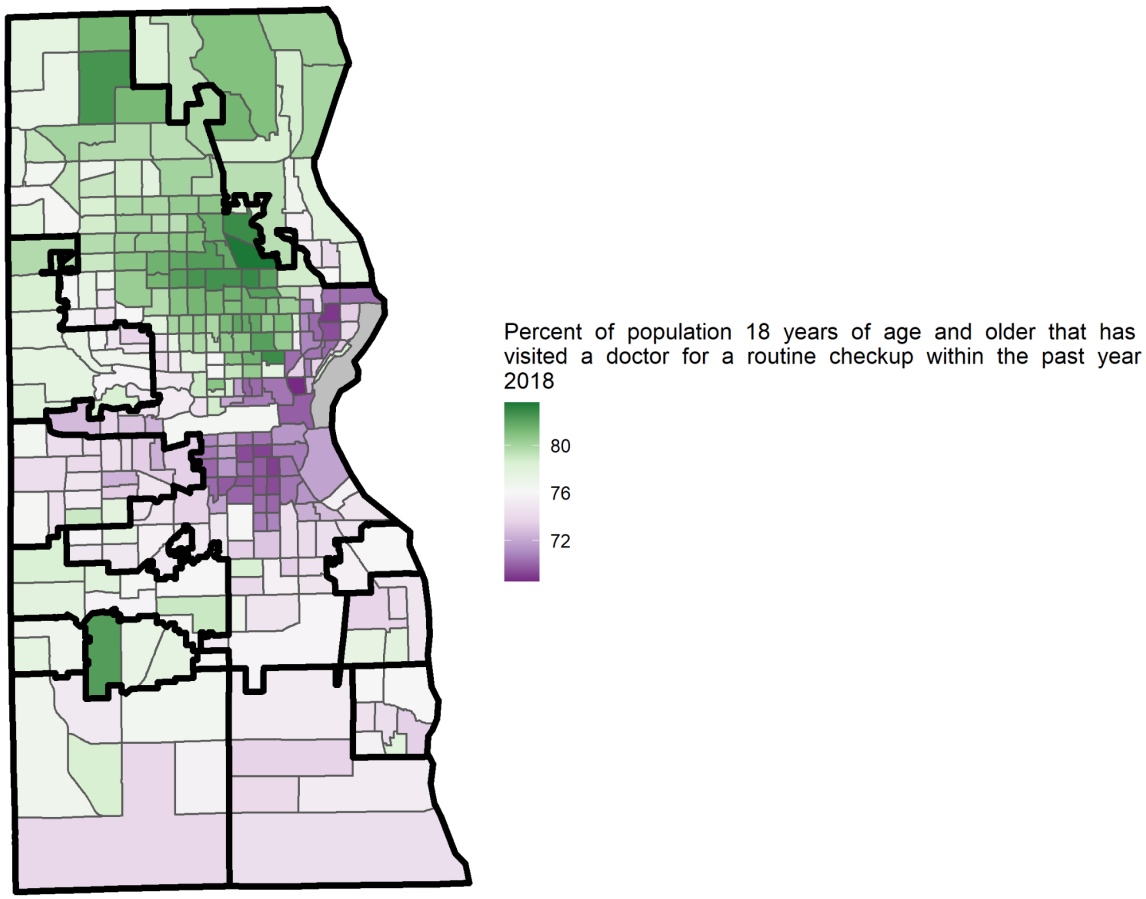
Poor Mental Health



Source: BRFSS

Variability exists across jurisdictions in the share of the adult population receiving an annual check up. Routine visits to the doctors office were least common in Oak Creek, West Allis, and the City of Milwaukee. Within the City of Milwaukee there is substantial variation, with predominantly Latinx areas showing lower rates of annual check-ups.

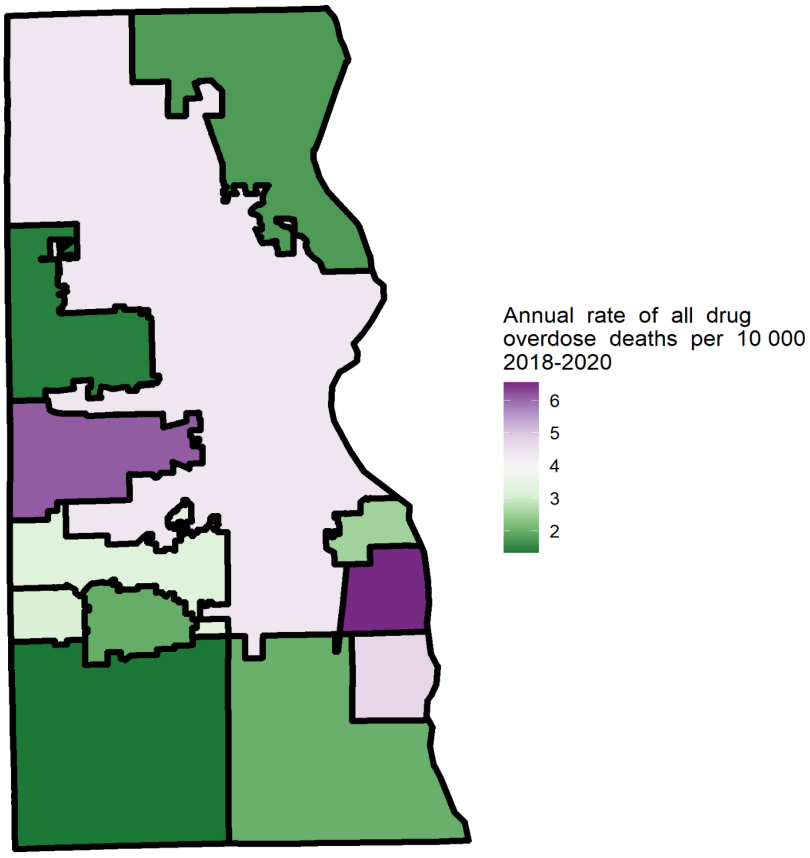
Routine Checkup



Source: BRFSS

Cudahy, West Allis, South Milwaukee and the City of Milwaukee have higher rates of death from drug overdose. Cudahy's rates are over 3 times higher than rates in Franklin, Greendale, North Shore, Oak Creek, and West Allis.

Deaths from Drug Overdose



Source: Wisconsin Department of Health Services

Social Determinants of Health

Opportunities for children to access healthy environments and quality education vary across jurisdictions. Child opportunity scores are lowest in the City of Milwaukee, Cudahy, and South Milwaukee.

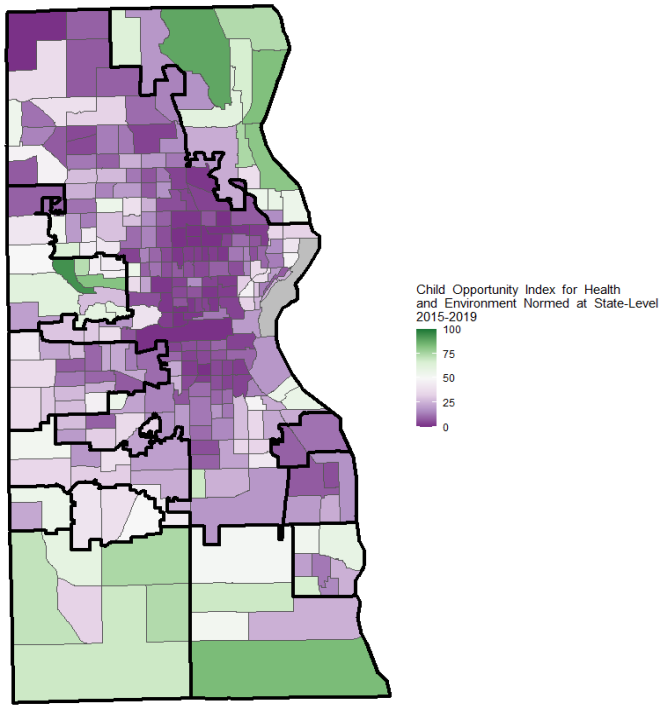
The Health and Environment Child Opportunity Index summarizes data for:

- access to healthy food options
- access to green spaces
- walkability
- vacant housing
- airborne microparticles
- ozone concentration
- index of industrial pollutants
- proximity to hazardous waste sites
- extreme heat exposure
- health insurance coverage

The Education Child Opportunity Index summarizes data for:

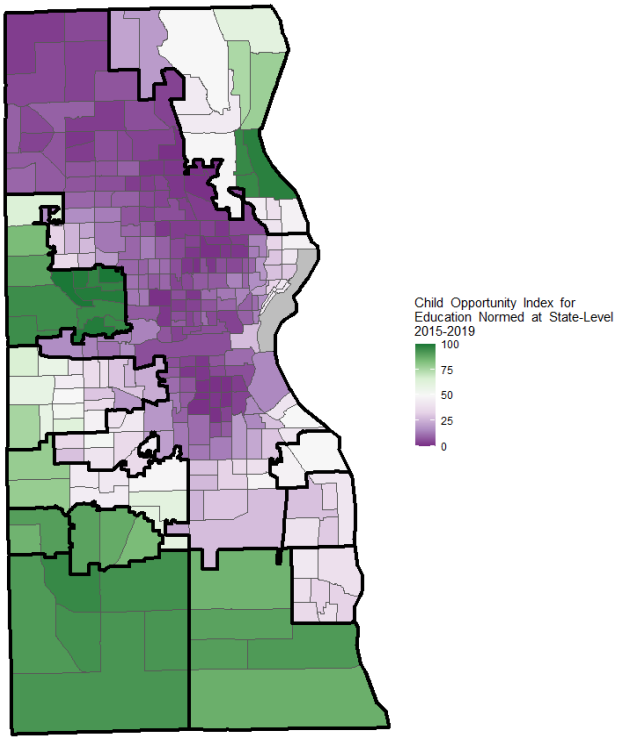
- Early childhood education centers
- high-quality early childhood education centers
- ECE enrollment
- 3rd grade math proficiency
- 3rd grade reading proficiency
- HS grad rate
- AP course enrollment
- college enrollment in nearby institutions
- school poverty
- teacher experience
- adult educational attainment

Child Opportunity Index - Health & Environment



Source: diversitydatakids.org

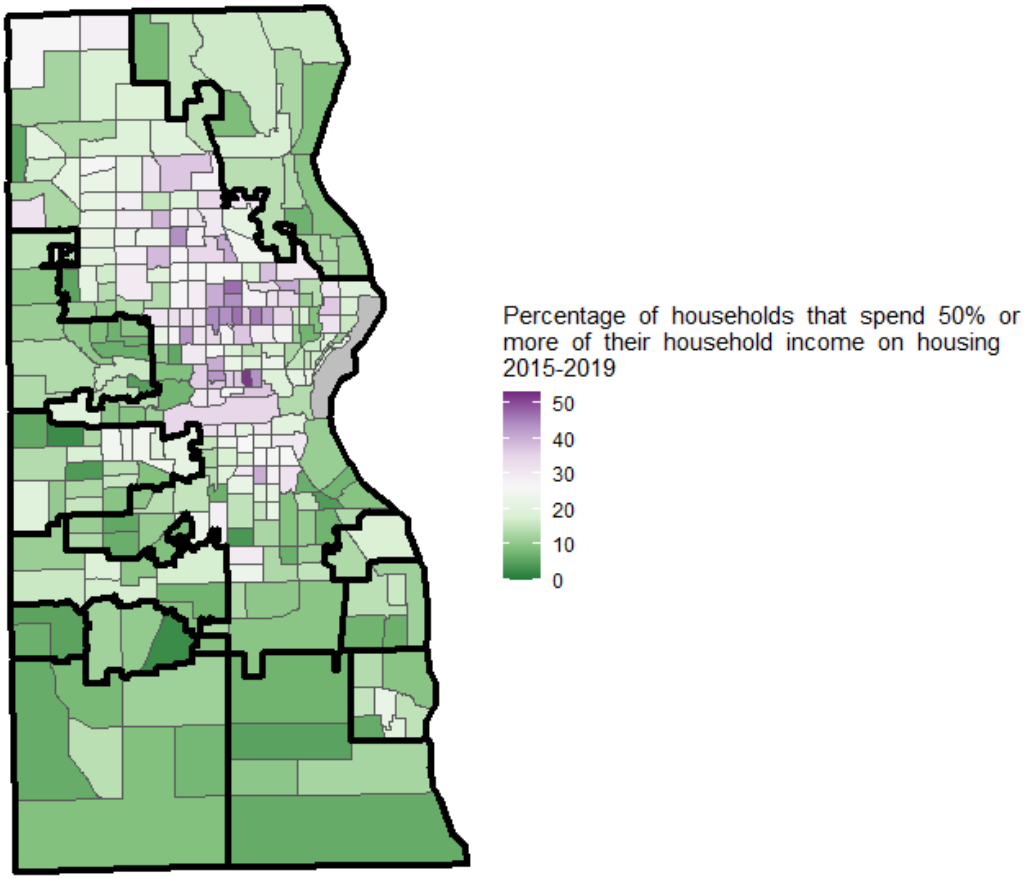
Child Opportunity Index - Environment



Source: diversitydatakids.org

Across all jurisdictions, there are similarities in the share of households spending more than half or more of their income on housing (severe housing cost burden). The City of Milwaukee has a greater share of households that are severely cost burdened, and the most variation among census tracts in households that are cost burdened (ranging 0 to 53%). Nearly 1 in 10 households is spending half or more of their income on housing.

Housing Burden



Source: ACS

Themes from Interviews with Public Health Officers

We conducted interviews via video conference with eight public health officers (PHOs), or their designee, in the county:

- Ann Christiansen - North Shore
- Darcy Dubois - Oak Creek
- Lauren Gottleib, for Courtney Day - Franklin
- Kristen Johnson - City of Milwaukee
- Bob Leischow - West Allis
- Heather Puente - Cudahy
- Darren Rausch - Greenfield
- Laura Stephens - Wauwatosa

Our questions included:

1. How do you define public health? And what is your department's unique role in fulfilling that in your community?
2. What are the things in your community that most influence and drive health and health inequities?
3. What are your biggest challenges as it relates to improving health in your community? As it relates to improving racial health equity and addressing structural racism?
4. What are your processes for determining what work the department does (e.g., programming, services, and policy)?
5. How do the programming and services you offer, and the policy work you do, relate to other public health and non-public health systems within your city and within the county?
6. What is the overall strategy, guiding framework, or theory of change behind the agency's work?
7. How would you describe how you involve, engage, and/or partner with community members and residents in your work?
8. Where have you been most successful as an agency broadly and in terms of equity? What do you consider to be big accomplishments or milestones you've achieved? How did those come about?
9. Which populations in your jurisdiction have the worst health outcomes, despite the services, programming, and policy work you provide? Why do you think that is? Are there additional things your agency can do to improve their health outcomes? If so, what are those and why aren't they currently being done?
10. What would you consider to be the most important cross-municipal coordination opportunities that would support health overall? That would support advancing racial health equity and addressing structural racism in particular?

Rather than summarize answers to each question, below we summarize themes from the responses we heard.

PHOs used a broad definition of public health that went well beyond statutory requirements. Most PHOs started by naming the statutory role public health plays, as defined by the state (e.g.,

immunizations, restaurant inspections, sexually transmitted diseases), but then went further to add additional roles. Those included:

- Contributing to the social safety net, such as free clinics, to provide health services that would otherwise not be available
- Work on the social determinants of health, such as "ensur[ing] that where folks live, learn, work, and play are safe and live up to their full potential"
- Advancing Public Health 3.0 and serving as a health strategist for the community
- Convening others to focus on particular issues (e.g., The health department could become a neutral convener and help align organizations behind doing what is best for the community)
- Supporting people across their lifespan, from child development, to supporting families and parents, to taking care of the elderly.

***Suburban PHOs recognize that their suburbs have growing numbers of BIPOC residents and people traveling into their jurisdictions for work, but feel they lack the connections and resources to address any unique needs these populations may have*.** Most PHOs named that the population in their jurisdiction was mostly (~90%) white and many said their populations were more affluent. Many named their aging population as a big focus of their department's work. The main exception to this is the City of Milwaukee, which has a large Black population, and most PHOs recognized that difference.

Most PHOs recognized that they have growing populations of people of color, including immigrants. They further recognized that their health department programs and services are currently not responsive to the needs of those populations largely because they don't have strong relationships in those communities and do not have accurate data for these communities, making it challenging to know their needs. Similarly, most PHOs recognized that they have some low-income residents (e.g., low-income housing residents) - and some have a substantial number of low-income residents and residents living in poverty - but, beyond the categorical funding that health departments had to serve these populations, there currently were not resources or bandwidth to provide any additional services to these populations.

Most PHOs named that significant numbers of people travel into their jurisdictions for employment - e.g., for low-paying service jobs and manufacturing jobs - and, while some (not all) health officers saw these workers as part of their responsibility, they did not yet have specific programs or services for them. COVID-19 has changed this somewhat, with some health departments now working with large employers in their jurisdiction.

***While some PHOs have a broad conception of factors that lead to poor health - including the social determinants of health and structural racism - most continue to narrowly focus on behaviors in their programs*.** When asked about what led to poor health in their jurisdiction, most PHOs focused on behaviors, such as diet and exercise, and many also named stress, substance abuse, and mental health. Several named isolation among seniors. Less frequent answers included: poverty, racism, distrust of government and/or health care, lack of access to public health services, lead, food insecurity, housing, and transportation. One named the social determinants of health broadly, including income and education specifically.

At least one PHO explicitly focused on structural racism and the political determinants of health. They discussed decisions made decades ago, such as redlining and disinvestments in public services. They also pointed to the lack of economic opportunity, the challenges with the local schools, and issues like the lack of paid family leave and a living wage, as well as housing insecurity.

***PHOs engage community members in their work through Community Health Assessments (CHAs) and Community Health Improvement Plans (CHIPs), but would like to broaden and deepen community engagement in their work*.** All the PHOs we interviewed talked about their CHA and CHIP processes as critical to making decisions about their focus areas. While most discussed strong community engagement in these processes (with community defined to include everyone proportionally - i.e., no increased representation from those facing the worst health outcomes), all wanted to broaden and/or deepen that engagement.

Examples of programs and services that were mentioned more frequently include nutrition, healthy aging (e.g., injury prevention), substance use and mental health, and reproductive health. Not many PHOs discussed engaging in policy work, and those that did were mostly focused on issues recognized as being squarely within public health, like e-cigarettes. A few PHOs expressed interest in getting into and/or expanding SDoH policy work (e.g., increasing affordable housing, improving transportation).

***Increasing the visibility of the health department and improving internal organization were named as key recent accomplishments by PHOs*.** Several PHOs named increasing the visibility of the health department as a key accomplishment, and several others pointed to increasing their internal organizational strength. The City of Milwaukee named their Office of Violence Prevention and their passing a Racism is a Public Health Crisis declaration as their biggest accomplishments.

***Challenges named by PHOs include lack of data, lack of* understanding *of public health, and lack of community-based organizations in their jurisdictions*.** Almost every PHO named lack of data about the populations in their jurisdictions and the health issues they face as a huge challenge.

Many also named that people do not understand what the health department does, or now - in the midst of COVID-19 only understand the department's role as it relates to the pandemic. Because their populations tend to be on the healthier side, some health departments struggle to be a priority with their elected officials, especially in terms of budget. Public health is invisible, successful prevention work is unseen. In some cases, populations who could most use the department's services are not aware of those services. It is difficult to engage others in the health department's work.

Another challenge described by several PHOs is the lack of community-based organizations that serve people in their community and with whom the health department can partner.

Some PHOs named racism - and, in particular, local disagreements about the importance of racism - as a major challenge. At least one PHO went into the greatest detail about this, describing challenges that

included: lack of trust and damaged partnerships as a result of historic racism; trauma related to racism; and addressing structural racism in a way that impacts lives.

Few PHOs have a Theory of Change that grounds their work and guides their strategies, including for addressing health inequities. Most health departments had strategic plans, but those plans focused mostly on internal work (e.g., quality improvement, program evaluation). None named an explicit theory of change guiding their work, though one named Trauma Informed Care as a guiding principle.

With regard to equity, a few PHOs named equity as a high-priority core value for their department and a few described focusing services and resources on those with poor - or the worst - health outcomes (aside from seniors).

PHOs conveyed varying degrees of understanding of racial equity and the need to prioritize it. Some expressed that racial equity as something bigger than the health department could take on alone. One PHO named that there is denial locally that structural racism is an issue. A few PHOs recently passed a Racism is a Public Health Crisis declaration in their jurisdiction. Those PHOs that have thought most about racial equity are still challenged by taking next steps and implementing action.

PHOs report having little connection to County DHHS and few relationships through which to advance Health in All Policies. Many PHOs have relationships with one another, but fewer reported relationships with the City of Milwaukee Health Department.

All PHOs reported having some interaction with the county's Department of Health and Human Services (HHS), but most did not have a lot of interaction with them and found it challenging to connect with them. A few PHOs named the Aging and Disability Resource Center as a good partner. Several PHOs were concerned with what they described as a disconnect in understanding of work being done locally or the local context of needs and issues.

A number of PHOs brought together or were part of local coalitions within their jurisdictions and, sometimes across jurisdictions, that were thought to be effective (e.g., around substance abuse).

A number of PHOs indicated that they have good relationships with local education systems and with the local hospital systems. A small number also have strong relationships with other agencies (e.g., housing). Almost all expressed interest in having stronger relationships, in particular for Health in All Policies work.

Community engagement was a priority named by all the PHOs interviewed, and most saw community engagement primarily as a way to obtain information from the community. Most reported their primary community engagement took place in their CHA and CHIP processes, with varying degrees of success.

A few PHOs named strong community groups, like neighborhood associations, as assets. A barrier to engaging communities of color, named by several PHOs, was that organizations that work with or represent people of color do not work in their jurisdictions.

Most PHOs described community engagement as a way to obtain information for the health department. Only one PHO named growing the power of people in the jurisdiction as a goal: "I think we need to have them [community members] as decision makers. We should be vested in their lives and how we are addressing their outcomes."

Suggestions on what to do to improve coordination and provide more or better services. PHOs shared a number of suggestions for improving coordination and services. These included:

- Conduct a single CHA and CHIP across the county, and coordinate this with Community Health Needs Assessments done by the health systems
- Improve the availability and quality of data
- Focus on trust building (e.g., between County agencies and local agencies) to increase understand of and respect for local work being done
- Improve communications across the county (e.g., create county-branded communications campaigns)
- Share cross-cutting resources (e.g., messaging and communications)
- Build on strategic collaborations across the health departments (e.g., AODA work, COVID-19 work)
- Create a public health collaborative
- Define specific roles for the county and different roles for local health departments:
    - The county could provide facilitative leadership on larger initiatives, such as those related to COVID-19, mental health, and drug overdose. It could play the role of convener, provide data, support communications, and lead the focus on health equity and racial equity. They could facilitate collaborative work while centering local needs and local assets.
    - Local health departments would be an active part of the discussion, representing the needs of local communities, and support local leadership and capacity building.
- Work together on cross-disciplinary, cross-boundary opportunities such as employee health and safety
- Work together on Health in All Policies initiatives
- Engage community groups that focus on particular populations in the City of Milwaukee to engage those same populations across the county
- Provide more racial equity training and capacity building

Opportunities For Advancing Health and Racial Equity

Through the collection of data for this project - the interviews, mapping of health outcome data, discussions with the steering committee, and the review of Milwaukee's history - a set of potential opportunities for increasing collaboration across public health departments emerged that would advance health and racial equity.

Critical Principles to Advance Health and Racial Equity

A set of underlying principles critical for advancing health and racial equity, based on our interviews and on best practices from across the country, include:

- Increase alignment and coordination of public health across Milwaukee County
- Cultivate and nurture meaningful, productive relationships across jurisdictions
- Ensure local leadership, perspectives, assets, and needs are valued and heard
- Center the assets and needs of those most impacted by current health and racial inequities through authentic engagement and meaningful investment
- Strategically address immediate needs alongside of coordinated systems, policy and practice changes
- Strategically maximize resources and support collective capacity building inside and outside of government

These principles are reflected in the initial opportunities described below organized under a nationally supported framework.

Opportunities to Advance Health and Racial Equity

The Association of State and Territorial Health Officials' (ASTHO's) *Foundational Practices for Health Equity* includes seven foundational practices that we use here as a framework for the opportunities that emerged through this project. While the document refers to organizations, we apply these practices to the overall public health agency infrastructure in Milwaukee County, and have replaced references to organizations to reflect this.

Foundational Practice I: Expand the understanding of health in words and action
"*The [public health infrastructure] is intentionally engaged in efforts to expand the understanding of what creates health both within the [public health infrastructure] and with external partners in order to eliminate structural inequities and create opportunities for health."*

> ***Opportunity 1: Develop a county-wide plan, based on Public Health 3.0 principles and health equity, that identifies a set of common priorities and coordinates work on those priorities.***
>
> Public Health 3.0, a framework developed by the Center for Disease Control and Prevention, conceptualizes integration across three areas of prevention— traditional clinical preventive interventions, interventions that extend care outside of the care setting, and population or

community-wide interventions (CDC Public Health 3.0). Although work in all of these areas is crucial to improve health, the work of Public Health 3.0 is focused on the second and third areas to engage multiple sectors and community partners to generate collective impact and improve social determinants of health (CDC Public Health 3.0).

By creating a county-wide plan that is built upon the Public Health 3.0 principles and health equity, Milwaukee County public health departments would be able to better address social determinants of health and root causes through collaboration.

Foundational Practice II: Assess and influence the policy context

"The [public health infrastructure] actively assesses the policy context in which people live, and how various policies differentially support or inhibit the ability of different groups of people to achieve their full health potential. The [public health infrastructure] is effective at leveraging policy change to address social determinants of health and advance health equity."

Opportunity 2: Create, fund, and staff a county-wide Health in All Policies initiative.

Health in All Policies is an approach to improving the health of all people by incorporating health considerations into collaborative decision-making across sectors and policy areas (NAM 2013). The goal of Health in All Policies is to ensure that decision-makers are informed about the health, equity and sustainability consequences of various policy options during the policy development process (California Health in All Policies Task Force, 2010).

Because many local health departments have not had the capacity to work on the social determinants of health, a Health in All Policies team could be created and jointly funded. Local health departments could continue to focus on providing basic functions and services, while the HiAP team would support work on the social determinants of health, which are often cross-jurisdictional issues (e.g., transportation). This team could be charged with addressing priority racial equity issues such as segregation in housing and education as well as the location of employment opportunities and public transportation.

A standing committee of public health officers could collaborate to identify common and/or cross-jurisdiction issues and priorities. Existing collaborative efforts (e.g., UEOC, Violence Response - Health and Safety Team) could be used as models to put in place mechanisms for further collaborative work.

Foundational Practice III: Lead with equity focus

"The [public health infrastructure] fosters and supports a commitment to addressing social and economic conditions to advance health equity as a primary focus of its mission and supports its leaders in that effort."

Opportunity 3: Build upon existing racial justice work by continuing outreach and education, moving public health, elected officials, and others toward a deeper understanding.

By completing training and continuously self-reflecting on racial justice work, public health staff can increase their knowledge and apply what they've learned in their own practice. Public health staff can then support others in the county in applying a racial justice lens to their work.

Current racial justice work, which has been impactful, could be broadened in terms of reach, and deepened to move people who have been trained to action.

Foundational Practice IV: Use data to advance health equity

"The [public health infrastructure] has performance improvement systems and infrastructure that provide actionable data for improvement and accountability advancing health equity."

Opportunity 4: Improve availability of sub-county data as well as finer grain data disaggregated among socially disadvantaged population groups, both accompanied by context that brings forward past and present assets and barriers.

A county-wide epidemiologist position could be created to lead data collection and analysis, guided by a cross-county team that helps identify county-wide and local priorities. The epidemiologist could also support the collection of new county-wide data (e.g., through surveys) if key data is not available at the sub-county level. They could also support a coordinated, county-wide Community Health Assessment and Community Health Improvement Plan.

Given the importance of both collecting and contextualizing sub-county data and data disaggregated by race/ethnicity, income, educational level, gender, and other factors, the epidemiologist(s) collecting and reporting this data should be trained on principles of data equity and/or should partner with subject matter experts and marginalized populations in the analysis and interpretation of the data.

Foundational Practice V: Advance health equity through continuous learning

"The [public health infrastructure] assures optimal workforce development and builds a culture of learning that incorporates improvement processes at all levels of the [public health infrastructure]."

Opportunity 5: Provide training and capacity building opportunities around health and racial equity for all the public health departments, as well as opportunities to continue to share with each other about racial equity initiatives.

Trainings and other capacity building opportunities related to racial and health equity for local health department staff could be expanded. A Community of Practice with guided discussions that promote self-reflection and skills-building could be started to support staff in applying a racial equity lens to their work.

Foundational Practice VI: Support successful partnerships and strengthen community capacity
"The [public health infrastructure] engages multiple partners – explicitly including communities of color, American Indians, and others experiencing health inequities – in strategic and powerful partnerships to transform public health practice in order to collectively address social determinants of health and advance health equity."

Opportunity 6: Engage and build trust with community groups that work with people most impacted by health and racial inequities, and identify sources of funding to support their work.

Community groups that work with those facing health and racial inequities could be further engaged in local health department work, including helping the departments set priorities. In some cases, an important first step would be building trust. Priority projects could be jointly led, and funding shared with community partners.

Community groups focused within the city of Milwaukee could be engaged - and funded - to expand their community engagement work across the county.

Foundational Practice VII: Assure strategic and targeted use of resources
"The [public health infrastructure] optimizes the use of resources and directs investments to address social determinants of health and health inequities."

Opportunity 7: Create mechanisms to share resources that are helpful across jurisdictional boundaries.

During the COVID-19 pandemic, Milwaukee County public health departments have come together to share resources that are relevant to the needs in their jurisdictions. Creating a structure and mechanism to share resources amongst one another will increase the likelihood this practice will continue beyond the pandemic.

For example, mechanisms could be created to improve public communication (e.g., messaging) across the county. By coming together to strategize, resources could be streamlined and public health messages could become more unified and clear.

Mechanisms to share resources could also include sharing data that may be relevant and useful for other jurisdictions in the county.

Discussion & Conclusion

Milwaukee can provide everyone with a fair and just opportunity to be as healthy as possible. Making Milwaukee the healthiest county in Wisconsin is one of Milwaukee County Executive David Crowley's top priorities. Achieving this goal requires understanding the underlying causes of poor health outcomes and then building the infrastructure to address those causes. Furthermore, it requires improving the health of those facing the worst health outcomes, providing everyone with a fair and just opportunity to be as healthy as possible.

Our health is intertwined with that of our fellow community members. Doing this work will lead to improvements in well-being for everyone in the county, including those currently experiencing better health outcomes. The COVID-19 pandemic illustrates this: had the county had a better coordinated and fully resourced public health system, it would have experienced fewer cases of and deaths from COVID-19 across the board. In other words, we all do better when we all do better.

The data displayed in maps above (and below in the appendix) clearly show that there are significant health disparities across the county - overall physical and mental health, access to healthcare, drug overdoses, and rates of chronic diseases like asthma, diabetes, and obesity. Those disparities lead to a huge 23 year difference in median life expectancy between Census tracts in the county.

Over the past decades, evidence from the field of public health has revealed that where we live, work, and play - what are known collectively as the social determinants of health - have more of an impact on our health than individual behaviors. The maps above and below are consistent with this: the Census tracts experiencing poor health outcomes also suffer from housing cost burden, unemployment, low income, poverty, poor scores on the childhood opportunity indices, and high area deprivation index scores. Public health teaches us that poor living and working conditions such as these lead to those poor health outcomes.

Public health calls these differences health inequities: differences in health status and mortality rates across population groups that are systemic, avoidable, unfair, and unjust. Milwaukee County faces significant health inequities.

The demographic maps above also indicate that the census tracts with poor health outcomes and poor social determinants of health are the places where many Black and Latinx people live. The racial history of the county explains this: historically, Milwaukee County has had many policies that have led to racialized outcomes: hyper-segregated housing patterns and high unemployment rates, poor schools, and high incarceration rates in Black communities, for example. As described above, this racial history, and current policies that do not account for that history, contribute to the current day health outcomes and inequities shown in the maps.

Addressing these health and racial inequities, and thereby moving the county toward its goal of improving health outcomes, is highly complex work that will take time, resources, and focus.

Hyper-segregation, the mismatch of the location of good jobs and housing, and the lack of public transit, for example, require a suite of deep policy and practice changes.

Public health, and local public health agencies in particular, have an important role to play in addressing these systemic challenges and advancing health and racial equity. Across the country, public health brings, for example: a deep understanding of the social determinants of health and health and racial equity; evidence and data; a history as both conveners and leaders; and relationships both with decision makers and with the communities most impacted by health inequities. Solving systemic problems will require this knowledge and experience, and more.

A more coordinated public health system in the county can help lead the way toward the better future we seek. Public health leadership can work with others to set some common goals, such as improving public transportation, housing, and education systems, help identify what each community needs to achieve those goals, and support community officials in providing each community the resources it needs to get there. Doing so would improve health and other outcomes overall and reduce racial health inequities at the same time.

Most of the eight Public Health Officers we interviewed from within Milwaukee County expressed an interest in using their knowledge and experience to address the social determinants of health and several have begun work on addressing racial and health inequities. However, most of these health departments are small and have very limited capacity to do more than focus on the state's statutory requirements. Even if they want to address the social determinants of health and advance systemic change and health and racial equity, individually they do not have the capacity to do so.

A feasible solution to this problem is increased coordination between the eleven local health departments within the county, with a focus on addressing the social determinants of health and health and racial inequities. The initial opportunities outlined above - based on our interviews with the Public Health Officers and on what other health departments around the country are doing - describe some initial steps the county can take to work together to advance this agenda:

- Develop a county-wide plan, based on Public Health 3.0 principles and health equity, that identifies a set of common priorities and coordinates work on those priorities
- Create, fund, and staff a county-wide Health in All Policies initiative
- Build upon existing racial justice work by continuing outreach and education, moving public health, elected officials, and others toward a deeper understanding
- Improve availability of sub-county data as well as finer grain data disaggregated by socially disadvantaged population groups, both accompanied by context that brings forward past and present assets and barriers
- Provide training and capacity building opportunities around health and racial equity for all the public health departments, as well as opportunities to continue to share with each other about racial equity initiatives

- Engage and build trust with community groups that work with people most impacted by health and racial inequities, and identify sources of funding to support their work
- Create mechanisms to share resources that are helpful across jurisdictional boundaries

We have the knowledge, resources, and the power to enact policy and practice solutions that address structural racism and create a community where everyone can thrive. Improving the coordination of the public health infrastructure in the county is a crucial component of making Milwaukee the healthiest county in Wisconsin. These identified opportunities focus on the underlying causes of poor health outcomes and on advancing health and racial equity, both of which are critical for improving the health and wellbeing of all residents in the county, together.

Appendix A: Additional Maps & Data Tables

Data tables for maps presented in the main text.

Health Department	% population that is White	% Black	% Hispanic	% over 65
	Median Census Tract (Range: Min-Max)			
Cudahy	91.1% (86.3-92.1)	2.2% (1.1-6.3)	12.5% (2.3-18.1)	18.2% (14.8-33.2)
Franklin	84.4% (63.6-93.3)	0.9% (0.0-25.4)	6.6% (0.6-9.5)	18.1% (11.9-27.8)
Greendale	90.9% (76.0-94.1)	1.8% (0.2-2.8)	4.3% (2.2-6.1)	20.9% (17.8-35.4)
Greenfield	87.0% (79.5-88.7)	3.5% (1.9-7.5)	8.1% (4.7-15.3)	22.3% (18.0-28.6)
Hales Corners	93.3% (93.0-93.6)	1.4% (0.5-2.3)	7.8% (4.6-10.9)	19.9% (18.2-21.7)
Milwaukee	44.1% (0.0-97.7)	24.8% (0.0-100.0)	7.8% (0.0-83.4)	9.7% (1.2-37.2)
North Shore	83.3% (41.8-94.4)	4.9% (1.0-39.1)	3.0% (1.2-6.9)	18.7% (12.3-25.4)
Oak Creek	80.2% (78.4-91.9)	4.0% (0.9-7.2)	7.2% (5.3-13.2)	14.8% (10.4-17.5)
South Milwaukee	90.1% (86.3-95.3)	2.9% (0.3-5.0)	12.5% (7.3-18.9)	16.8% (12.0-27.4)
Wauwatosa	86.1% (79.2-95.8)	4.4% (0.1-10.7)	2.8% (0.4-6.3)	15.6% (6.4-26.1)
West Allis	83.3% (70.1-94.1)	6.1% (1.2-15.7)	11.6% (6.0-26.6)	14.0% (9.4-26.4)
Source: ACS 2015-2019				

Health Department	% Adults reporting poor physical health for 14 days or more in the last month	% Adults reporting poor mental health for 14 days or more in the last month	% adults who visited a doctor for a routine check-up in the last year
	Median Census Tract (Range: Min-Max)		
Cudahy	13.7 (12.8-15.1)	13.6 (12.3-15.0)	74.9 (73.7-77.8)
Franklin	11.1 (10.6-12.2)	11.1 (10.6-12.8)	76.2 (73.9-78.6)
Greendale	11.7 (11.3-12.3)	10.9 (9.0-11.2)	77.5 (77.3-82.3)
Greenfield	13.1 (11.4-14.3)	12.0 (10.3-12.7)	77.9 (75.8-79.0)
Hales Corners	11.6 (11.5-11.7)	11.1 (11.0-11.2	77.2 (76.8-77.6)
Milwaukee	16.4 (6.6-26.3)	16.9 (8.6-25.9)	76.0 (68.6-83.6
North Shore	9.3 (8.6-14.0)	9.6 (8.0-12.8)	78.4 (74.2-81.4)
Oak Creek	10.7 (10.3-12.8)	12.4 (11.4-13.0)	74.2 (73.6-75.3)
South Milwaukee	13.7 (12.8-18.0)	13.7 (12.4-15.7)	75.7 (73.5-77.9)
Wauwatosa	9.6 (7.8-11.4)	10.2 (8.5-11.0)	77.1 (73.7-79.7)
West Allis	13.4 (11.8-15.0)	13.5 (11.1-16.1)	74.4 (72.4-79.0)
Source: BRFSS 2018			

Health Department	Annual rate of fatal drug overdoses per 10,000 people
Cudahy	6.5
Franklin	1.3
Greendale	2.0
Greenfield	3.3
Hales Corners	3.1
Milwaukee	4.4
North Shore	1.8
Oak Creek	2.0
South Milwaukee	2.5
Wauwatosa	4.7
West Allis	1.4
Source: Wisconsin Department of Health Services 2018-2020	

Health Department	Health and Environment Child Opportunity Index	Education Child Opportunity Index
	Median Census Tract (Range: Min-Max)	
Cudahy	18.0 (6.0-24.0)	35.0 (29.0-42.0)
Franklin	70.0 (33.0-75.0)	93.5 (92.0-96.0)
Greendale	41.0 (39.0-50.0)	88.0 (84.0-90.0)
Greenfield	33.5 (19.0-53.0)	60.5 (44.0-79.0)
Hales Corners	39.5 (23.0-56.0)	88.5 (86.0-91.0)
Milwaukee	12.5 (1.0-69.0)	9.0 (1.0-86.0)
North Shore	59.5 (17.0-89.0)	48.0 (20.0-98.0)
Oak Creek	61.0 (25.0-84.0)	90.5 (87.0-92.0)
South Milwaukee	21.0 (9.0-67.0)	39.0 (33.0-50.0)
Wauwatosa	55.0 (9.0-94.0)	96.5 (65.0-100.0)
West Allis	23.5 (8.0-46.0)	46.0 (20.0-76.0)
Source: diversitydatakids.org 2015-2019		

Health Department	Percent of households paying more than 50% of household income on housing
	Median Census Tract (Range: Min-Max)
Cudahy	12.0% (7.0-16.4)
Franklin	8.7% (6.6-14.6)
Greendale	10.8% (2.4-12.3)
Greenfield	14.0% (7.6-18.9)
Hales Corners	6.2% (5.4-7.1)
Milwaukee	21.7% (3.8-52.3)
North Shore	13.0% (7.3-17.9)
Oak Creek	8.3% (5.3-12.8)
South Milwaukee	15.1% (6.5-22.6)
Wauwatosa	11.0% (4.8-16.3)
West Allis	14.2% (2.5-25.3)
Source: ACS 2015-2019	

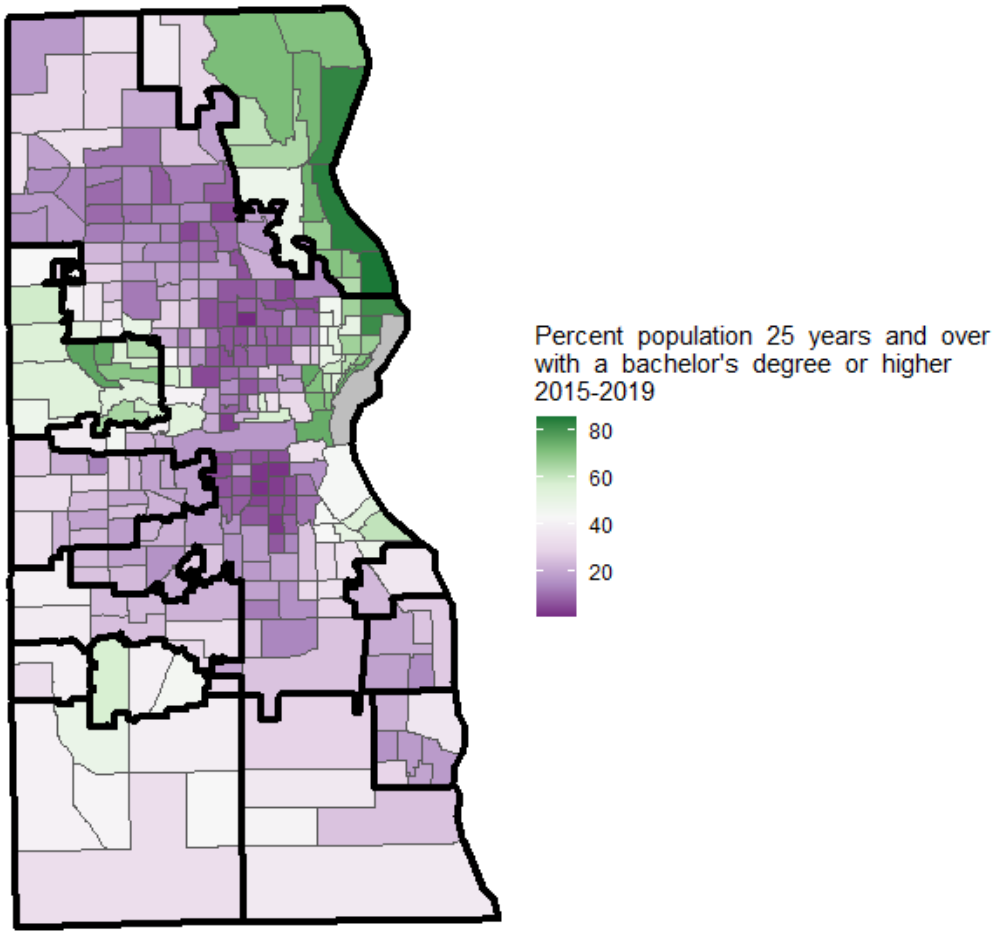
Additional maps and data tables

Summary of maps and data tables below

Map	Data Years	Source
Adults with a Bachelor's Degree or Higher	2015-2019	ACS
Poverty Level	2015-2019	ACS
Employment	2015-2019	ACS
Unemployment	2015-2019	ACS
Median Household Income	2015-2019	ACS
Uninsured	2018	BRFSS
Asthma	2018	BRFSS
Diabetes	2018	BRFSS
Obesity	2018	BRFSS
Life Expectancy	2010-2015	USALEEP
Low Birthweight	2018-2020	Health Compass Milwaukee
High Lead Levels	2014-2016	Wisconsin Department of Health Services
Non-fatal Drug Overdoses	2018-2020	Wisconsin Department of Health Services
Area Deprivation Index	2018	Neighborhood Atlas
Traffic Volume	2020	EJSCREEN

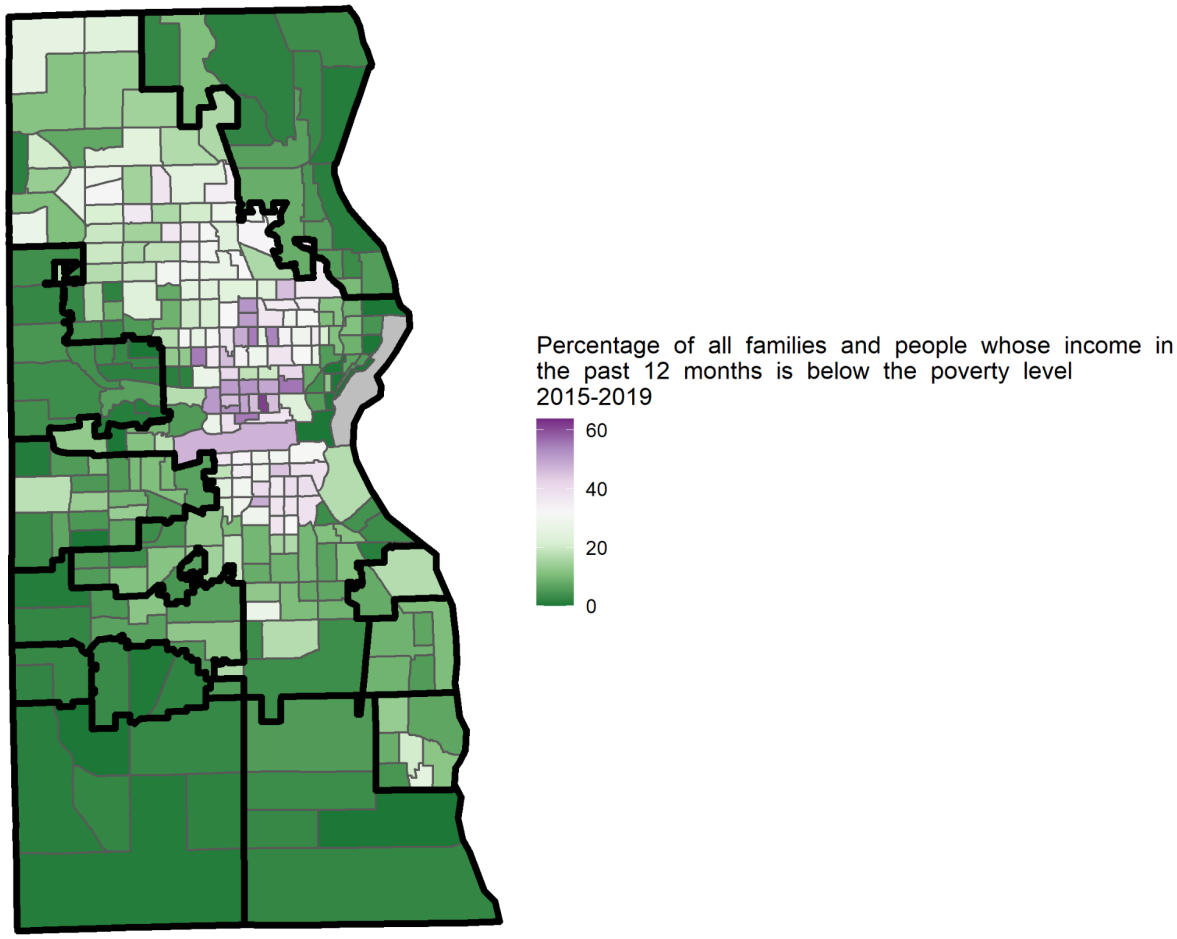
Health Department	% of adults over 25 with a bachelor's degree or higher	% of families and people whose income is below the poverty level in the last year	% of the population 16 and older in the labor force	% of population 16 and older unemployed
	Median Census Tract (Range: Min-Max)			
Cudahy	15.0% (11.8-22.1)	8.9% (5.5- 10.5)	65.1% (56.4-67.4)	1.9% (0.0-3.2)
Franklin	27.2% (19.9-29.0)	1.5% (0.0-2.4)	62.5% (40.0-69.0)	2.0% (1.6-2.6)
Greendale	31.4% (31.1-33.2)	1.8% (0.4-2.7)	65.7% (49.0-70.0)	1.7% (0.7-2.2)
Greenfield	23.7% (20.0-27.3)	5.1% (0.7-12.4)	61.1% (57.7-71.8)	1.5% (1.4-4.4)
Hales Corners	25.2% (24.2-26.1)	2.2% (1.9-2.5)	68.1% (64.7-71.4)	1.4% (0.7-2.0)
Milwaukee	12.5% (0.0-47.6)	20.2% (0.0-61.8)	63.3% (38.3-88.1)	4.0% (0.3-16.8)
North Shore	36.4% (17.8-42.6)	3.9% (0.7-10.7)	67.0% (56.7-75.8)	1.5% (0.0-3.2)
Oak Creek	23.6% (18.8-31.2)	2.4% (0.0-3.0)	70.9% (64.7-73.8)	1.8% (1.1-2.3)
South Milwaukee	16.5% (7.9-24.9)	12.1% (4.4-25.0)	64.6% 55.9-68.4()	2.8% (0.5-4.2)
Wauwatosa	35.3% (27.4-45.9)	3.3% (0.0-6.0)	68.9% (60.0-80.7)	1.2% (0.4-3.8
West Allis	19.1% (10.9-27.2)	6.9% (0.0-17.7)	67.6% (60.6-76.2)	2.3% (0.1-7.1)
Source: ACS 2015-2019				

Adults with a Bachelor's Degree or Higher



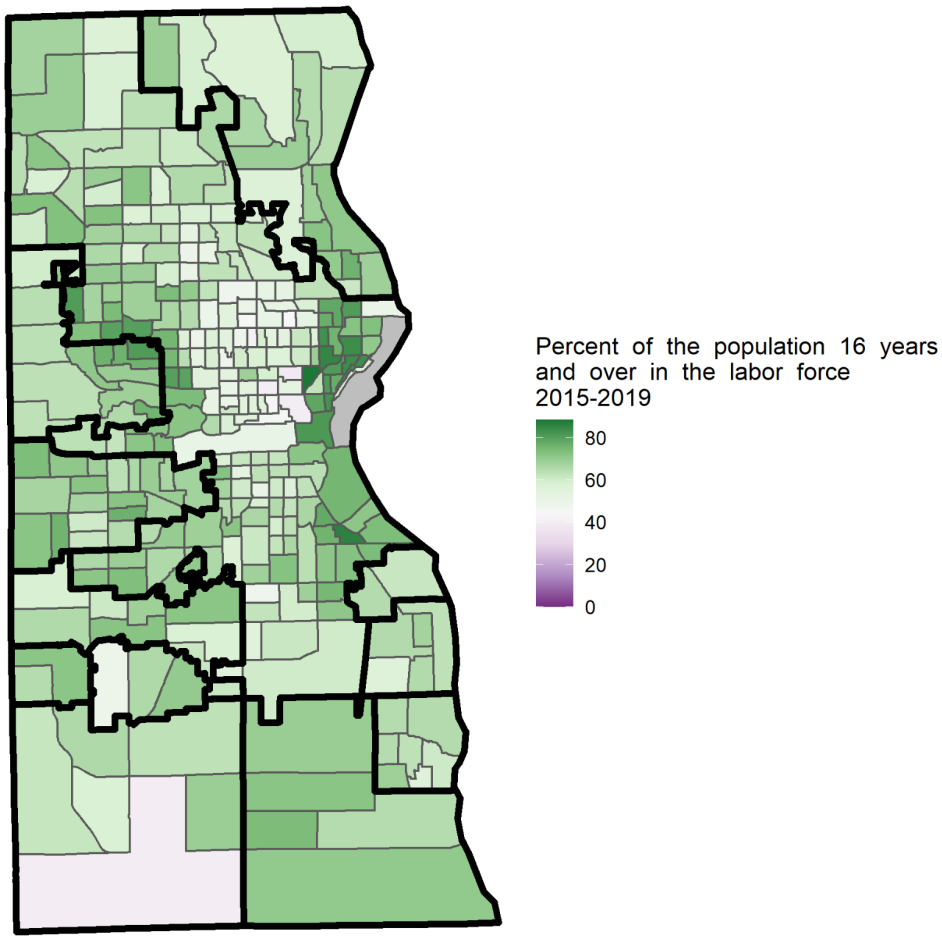
Source: ACS

Poverty level



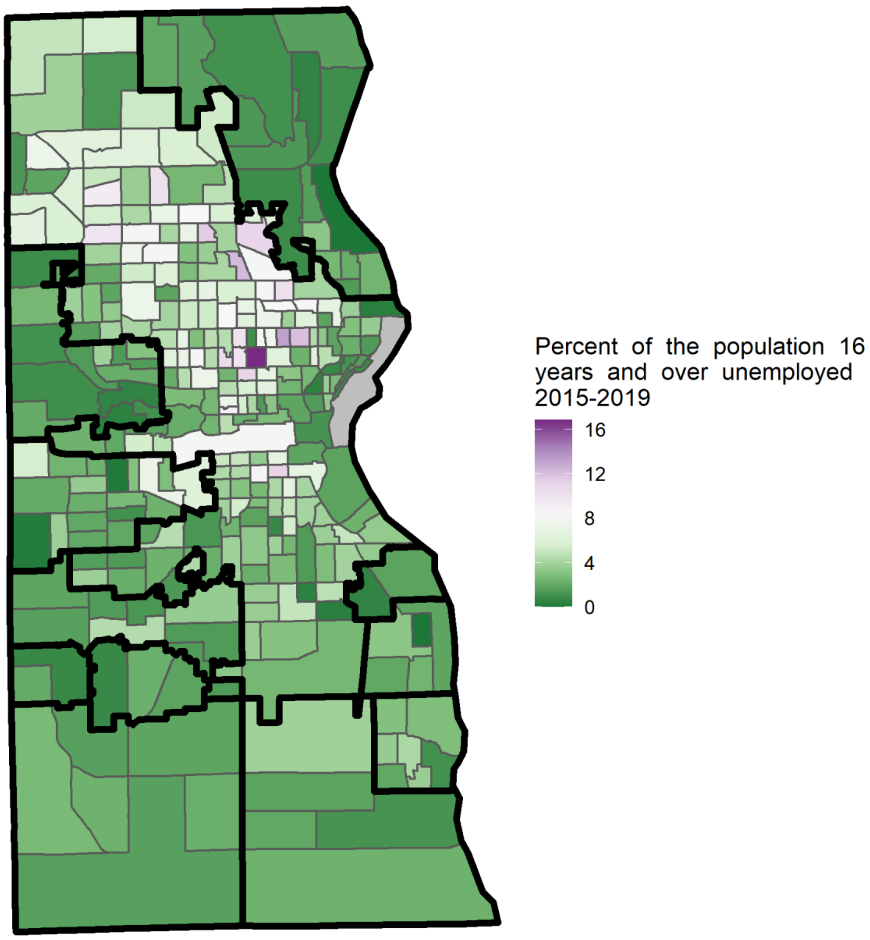
Source: ACS

Employment



Source: ACS

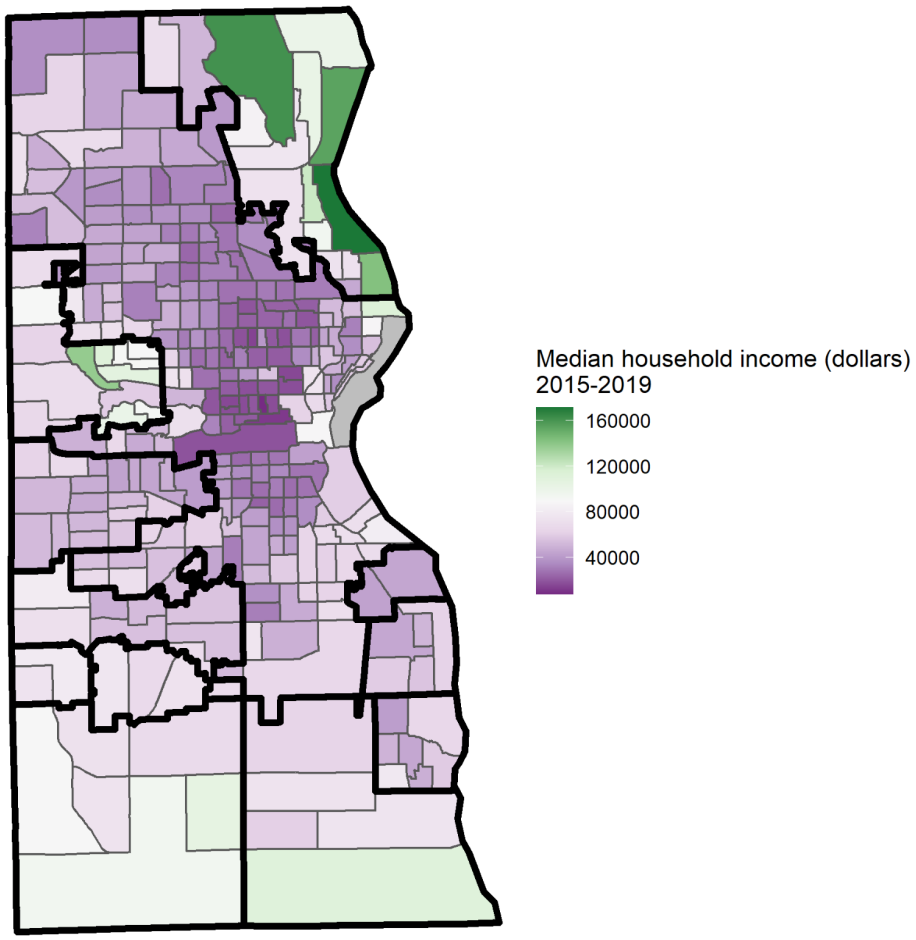
Unemployment



Source: ACS

Health Department	Median household income
	Median Census Tract (Range: Min-Max)
Cudahy	$56,522 (45,536-62,175)
Franklin	$81,367 (67,873-105,391)
Greendale	$73,451 (67,409-76,369)
Greenfield	$62,113 (48,929-80,313)
Hales Corners	$77,143 (74,375-79,911)
Milwaukee	$40,033 (7,917-113,375)
North Shore	$89,979 (46,111-171,533)
Oak Creek	$74,493 (60,933-111,277)
South Milwaukee	$48,398 (41,679-78,214)
Wauwatosa	$90,272 (59,893-137,800)
West Allis	$51,939 (43,663-67,974)
Source: ACS 2015-2019	

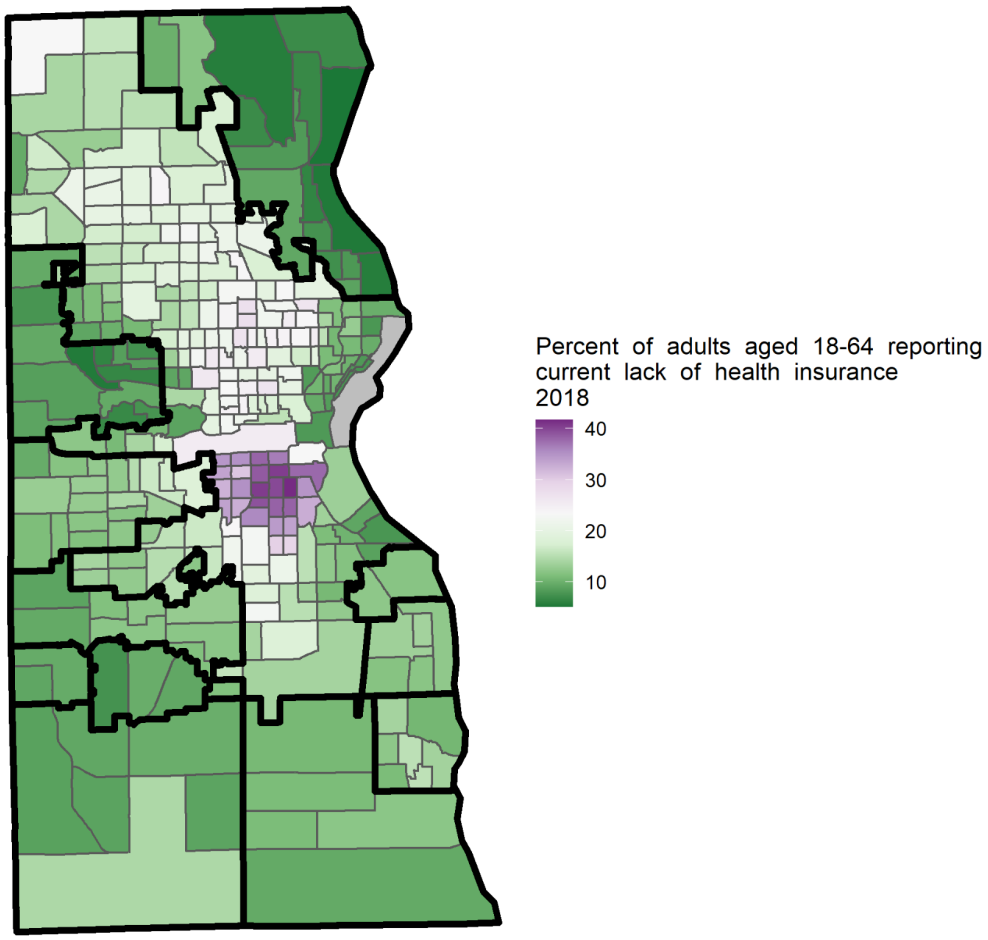
Median Household Income



Source: ACS

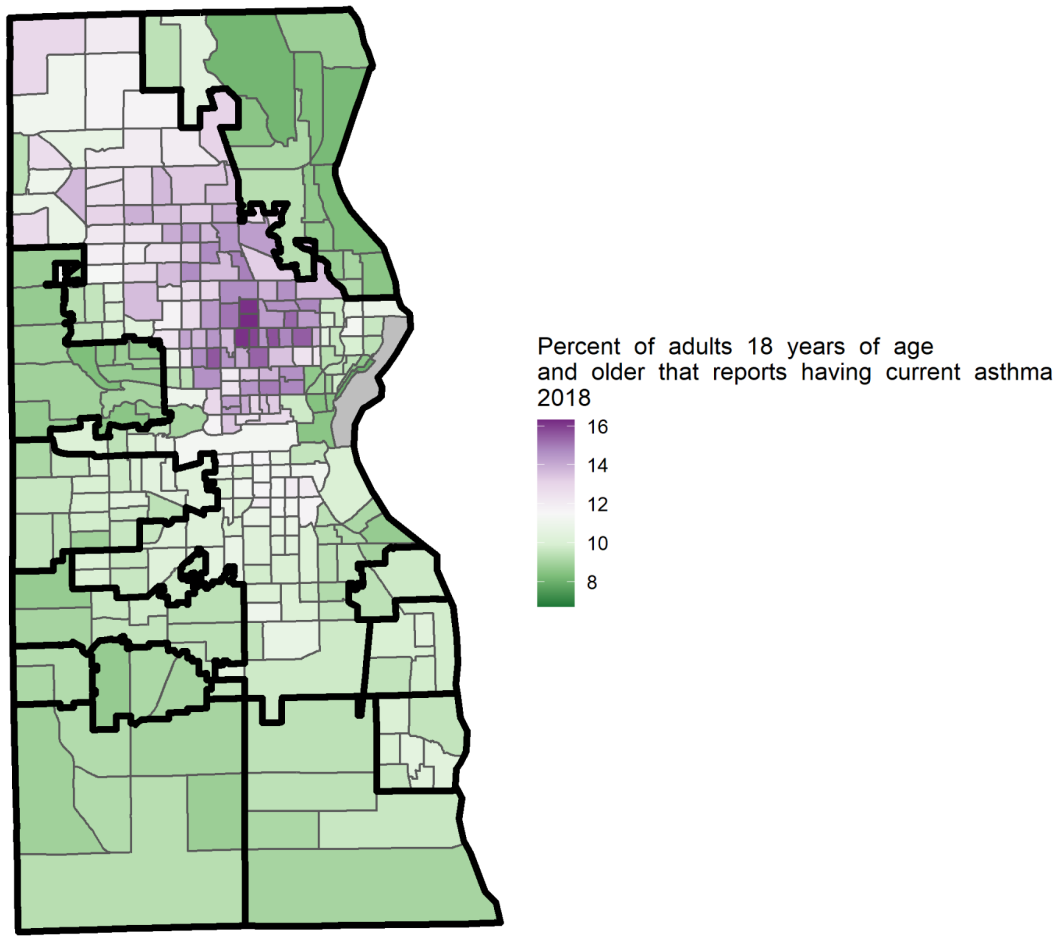
Health Department	% of adults 18-64 lacking health insurance	% of adults 18 and older with current asthma	% of adults 18 and older with diabetes	% adults 18 and older with BMI greater than or equal to 30 kg/m^2
	Median Census Tract (Range: Min-Max)			
Cudahy	12.3 (11.7-13.6)	9.8 (9.5-10.3)	9.6 (8.0-10.8)	33.1 (31.8-35.0)
Franklin	9.1 (8.7-14.3)	9.1 (8.8-9.3)	7.8 (7.3-9.0)	29.7 (29.6-31.9)
Greendale	9.2 (7.4-9.7)	9.0 (8.7-9.1)	8.5 (8.4-10.6)	29.5 (27.9-29.5)
Greenfield	11.4 (8.9-12.0)	9.5 (8.7-9.6)	9.3 (8.4-10.9)	30.5 (27.8-32.1)
Hales Corners	9.3 (9.1-9.5)	9.2 (9.1-9.2)	8.3 (8.3-8.3)	29.2 (28.7-29.6)
Milwaukee	18.2 (7.6-41.6)	11.5 (7.9-16.3)	12.1 (3.0-25.0)	40.1 (23.0-53.7)
North Shore	7.0 (5.1-11.8)	8.7 (8.1-10.4)	7.5 (5.8-11.3)	27.8 (26.3-35.4)
Oak Creek	11.0 (9.4-12.0)	9.3 (9.0-9.6)	7.0 (6.8-8.6)	30.5 (29.3-31.4)
South Milwaukee	12.2 (10.5-15.4)	9.9 (9.4-10.5)	8.9 (8.7-12.4)	32.5 (31.4-35.1)
Wauwatosa	8.0 (5.4-9.4)	8.8 (8.3-9.0)	7.0 (5.0-8.8)	28.0 (26.7-28.8)
West Allis	12.6 (9.6-16.9)	9.7 (8.9-10.6)	8.6 (7.4-10.5)	32.4 (28.2-36.0)
Source: BRFSS 2018-2020				

Uninsured



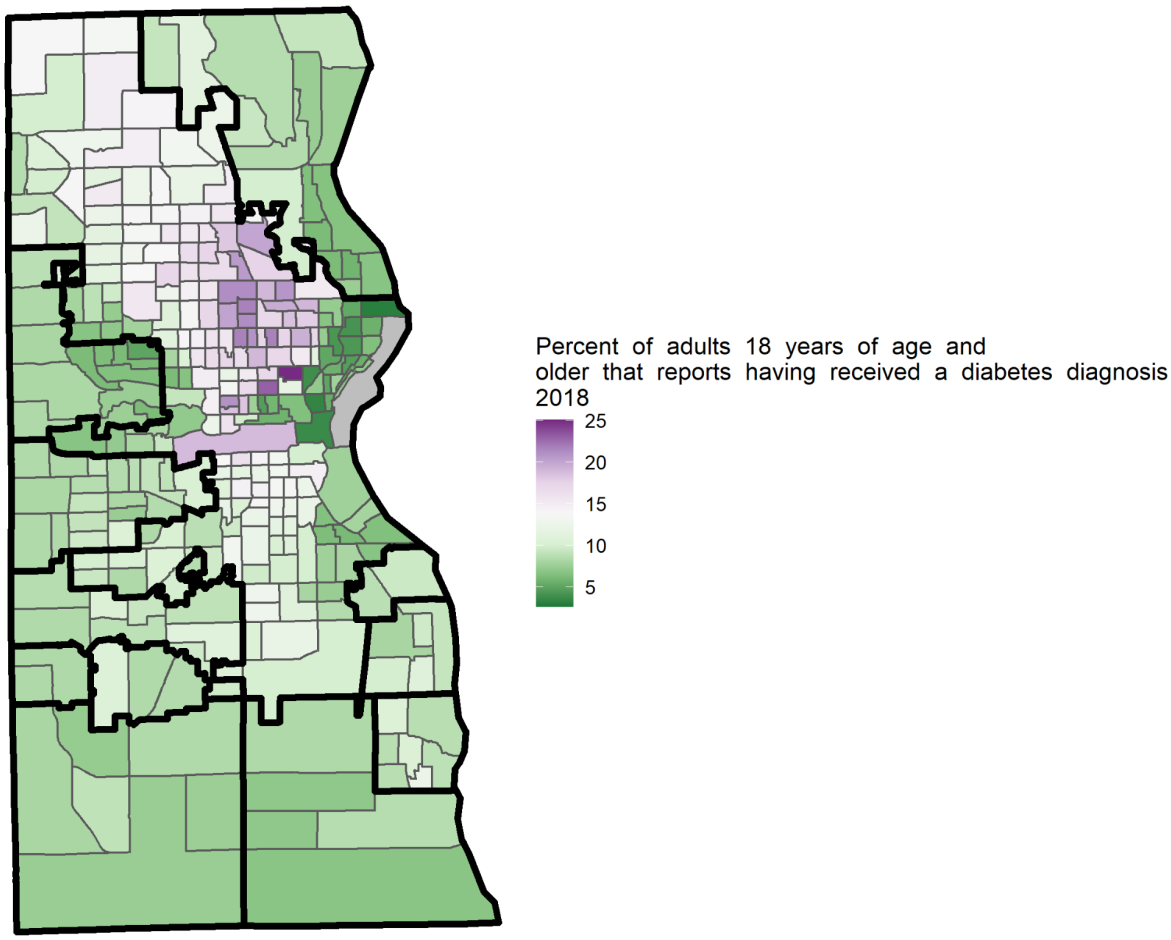
Source: BRFSS

Asthma



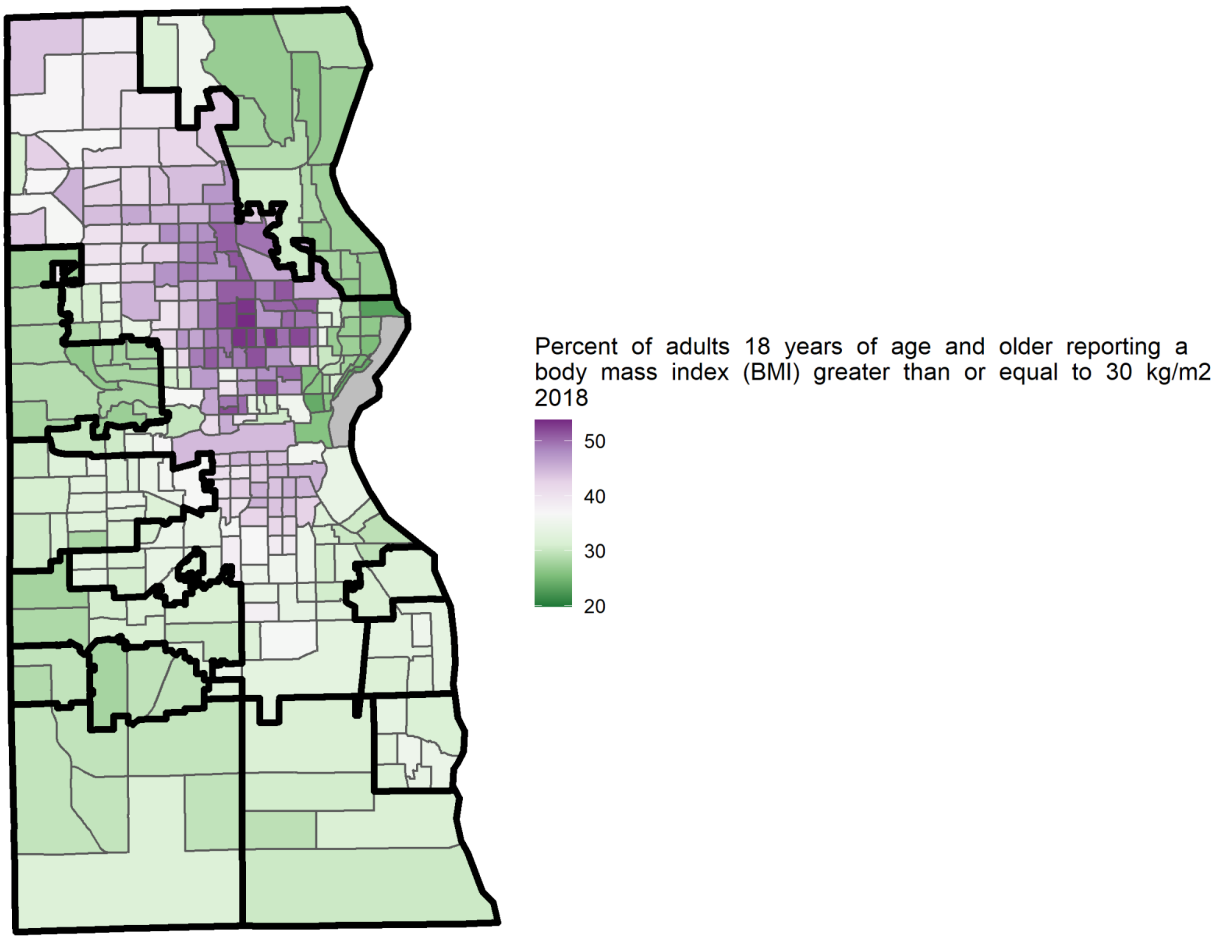
Source: BRFSS

Diabetes



Source: BRFSS

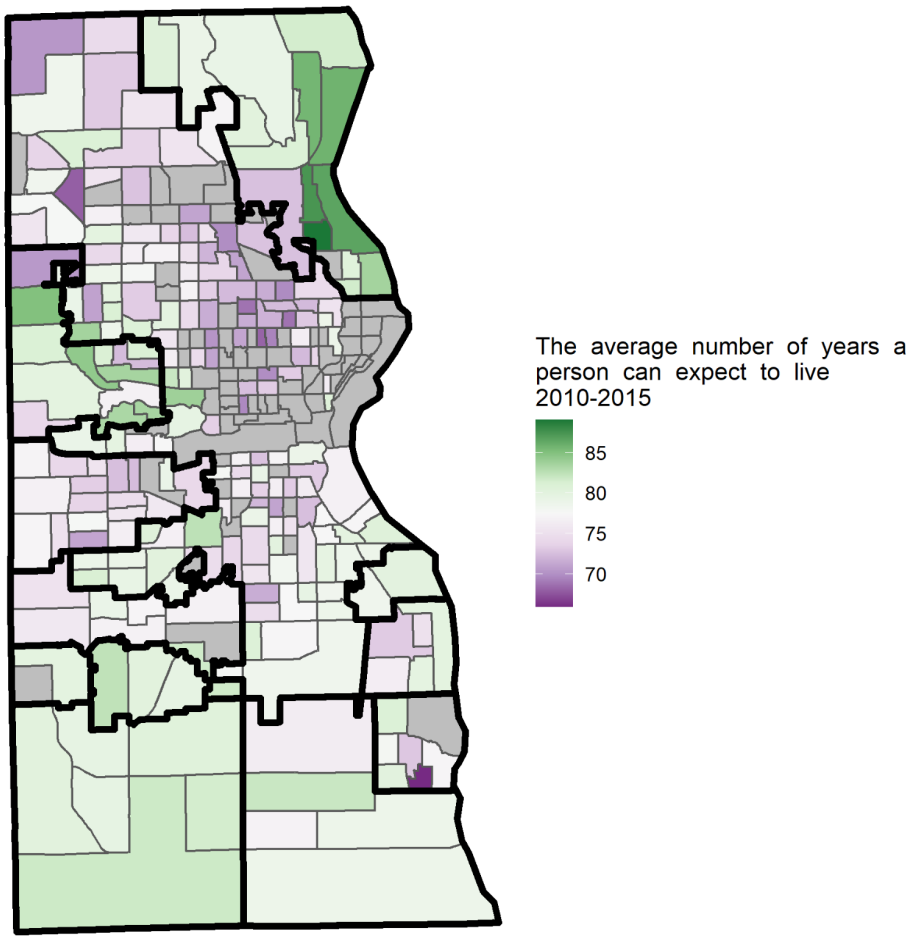
Obesity



Source: BRFSS

Health Department	Average number of years a person can expect to live
	Median Census Tract (Range: Min-Max)
Cudahy	76.4 (73.1-79.9)
Franklin	80.3 (79.6-81.8)
Greendale	80.2 (79.6-82.4)
Greenfield	76.8 (75.2-81.7)
Hales Corners	79.9 (79.9-79.9)
Milwaukee	76.2 (67.9-85.0)
North Shore	81.5 (72.6-89.0)
Oak Creek	78.8 (76.9-82.0)
South Milwaukee	78.3 (65.9-80.9)
Wauwatosa	81.1 (70.4-84.4)
West Allis	75.4 (71.1-79.1)
Source: USALEEP 2010-2015	

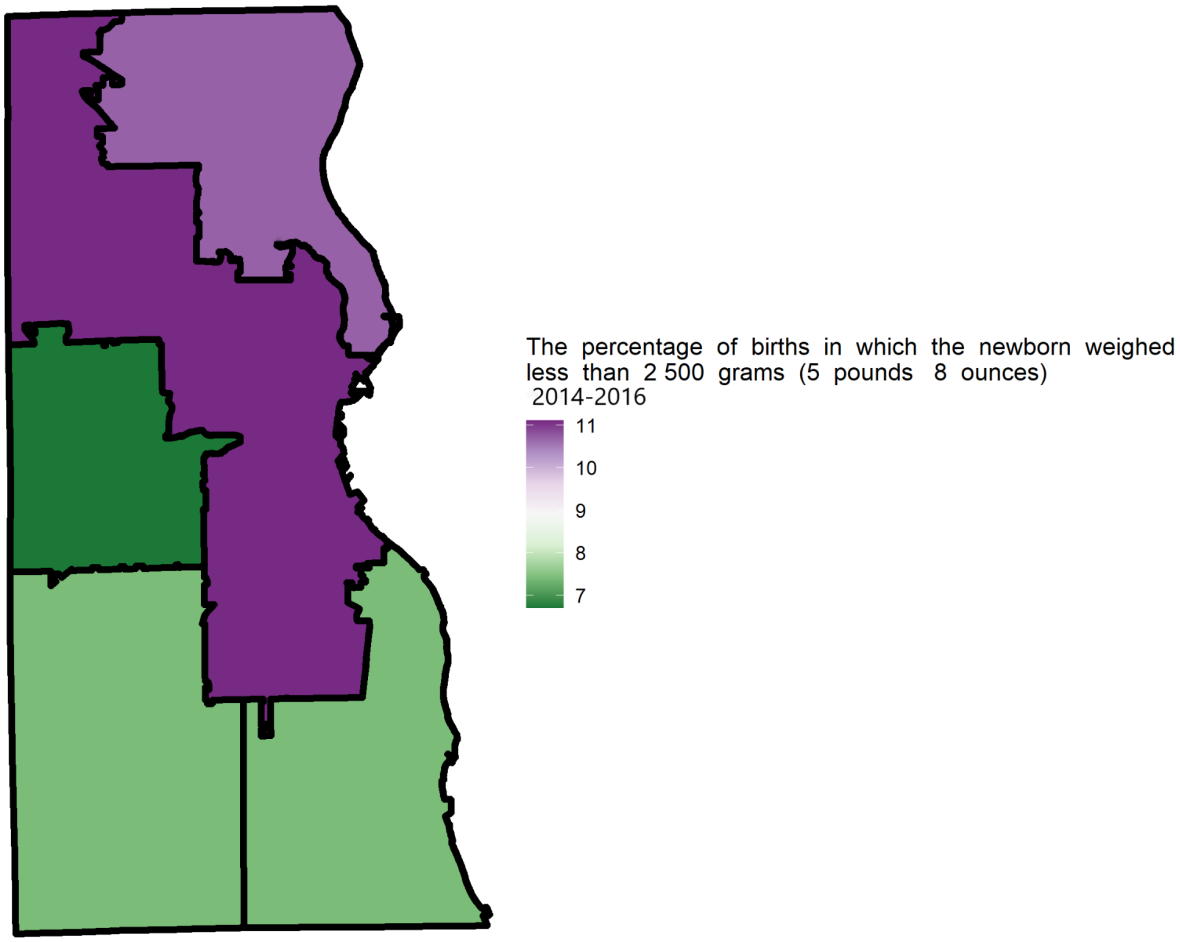
Life Expectancy



Source: USALEEP

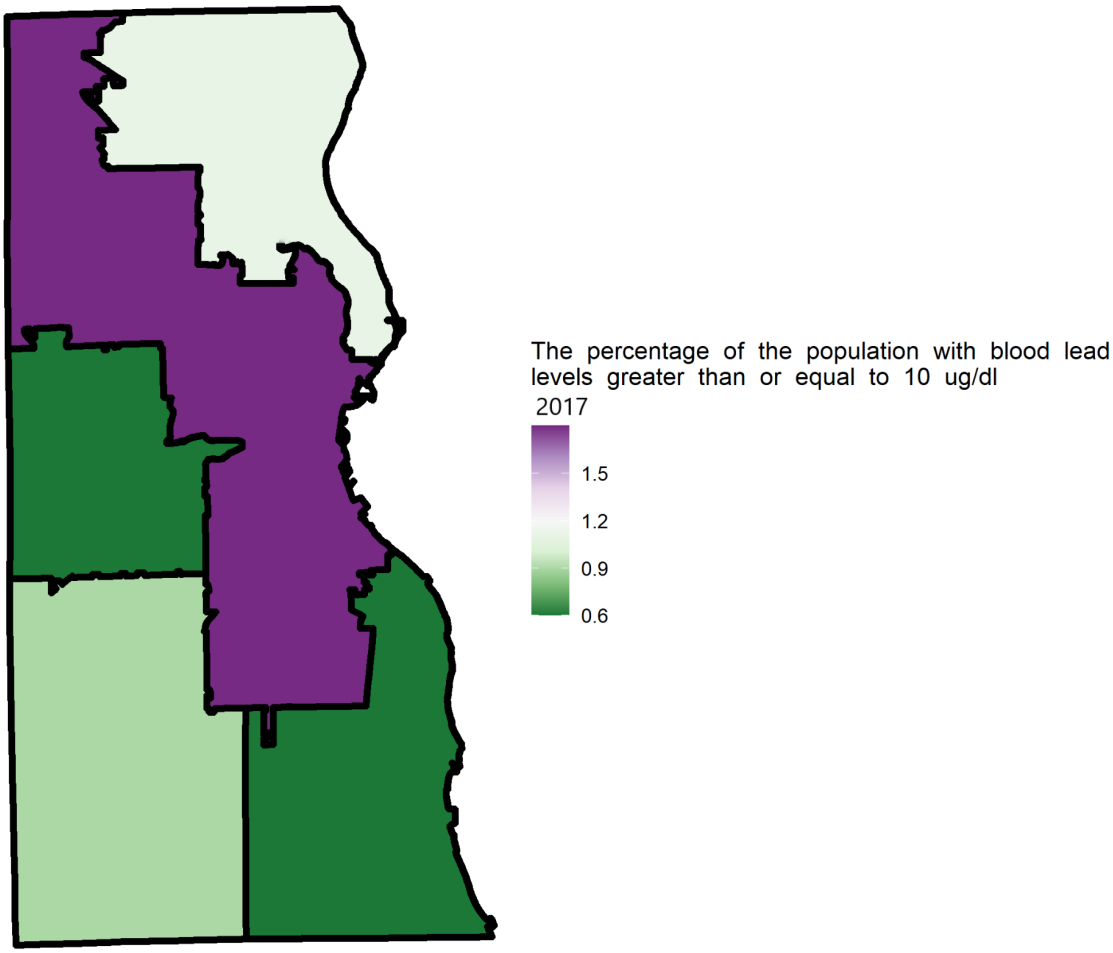
City Municipality	Percentage of live births in which the newborn weighed less than 2500 grams (5 pounds, 8 ounces)	Percentage of the population with blood lead levels greater than or equal to 10 ug/dl
City of Milwaukee	11.1%	1.8%
Northshore	10.7%	1.1%
Southshore	7.4%	0.6%
Southwest	7.4%	0.9%
West	6.7%	0.6%
Source:	Wisconsin Department of Health Services 2014-2016	Wisconsin Childhood Lead Poisoning Prevention Program 2017

Low Birthweight



Source: Wisconsin Department of Health Services

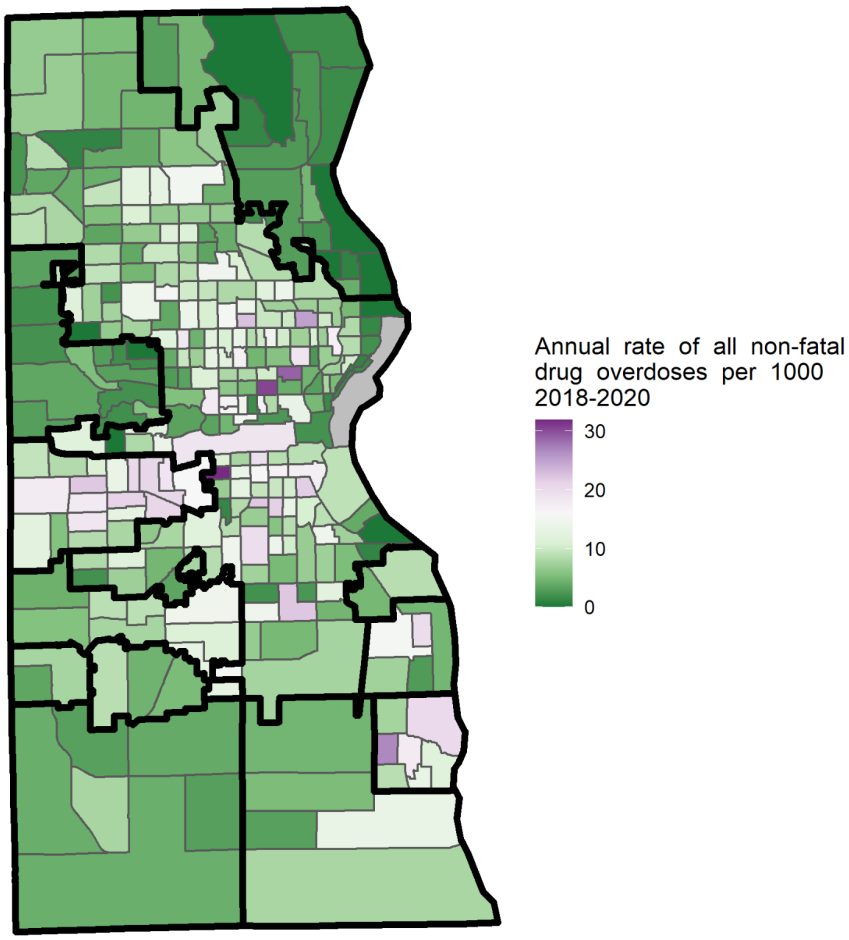
High Lead Levels



Source: Wisconsin Childhood Lead Poisoning Prevention Program

Health Department	Annual rate of non-fatal drug overdoses per 10,000 people
	Median Census Tract (Range: Min-Max)
Cudahy	19.1 (15.3-49.1)
Franklin	10.4 (5.3-15.3
Greendale	14.1 (13.5-17.2)
Greenfield	16.9 (13.6-22.9)
Hales Corners	12.8 (11.6-13.9)
Milwaukee	24.0 (3.7-89.1)
North Shore	9.1 (4.1-15.5)
Oak Creek	16.1 (12.9-28.2)
South Milwaukee	26.7 (12.9-42.8)
Wauwatosa	9.7 (5.3-21.0)
West Allis	34.2 (9.4-49.9)
Source: WIsconsin Department of Health Services	

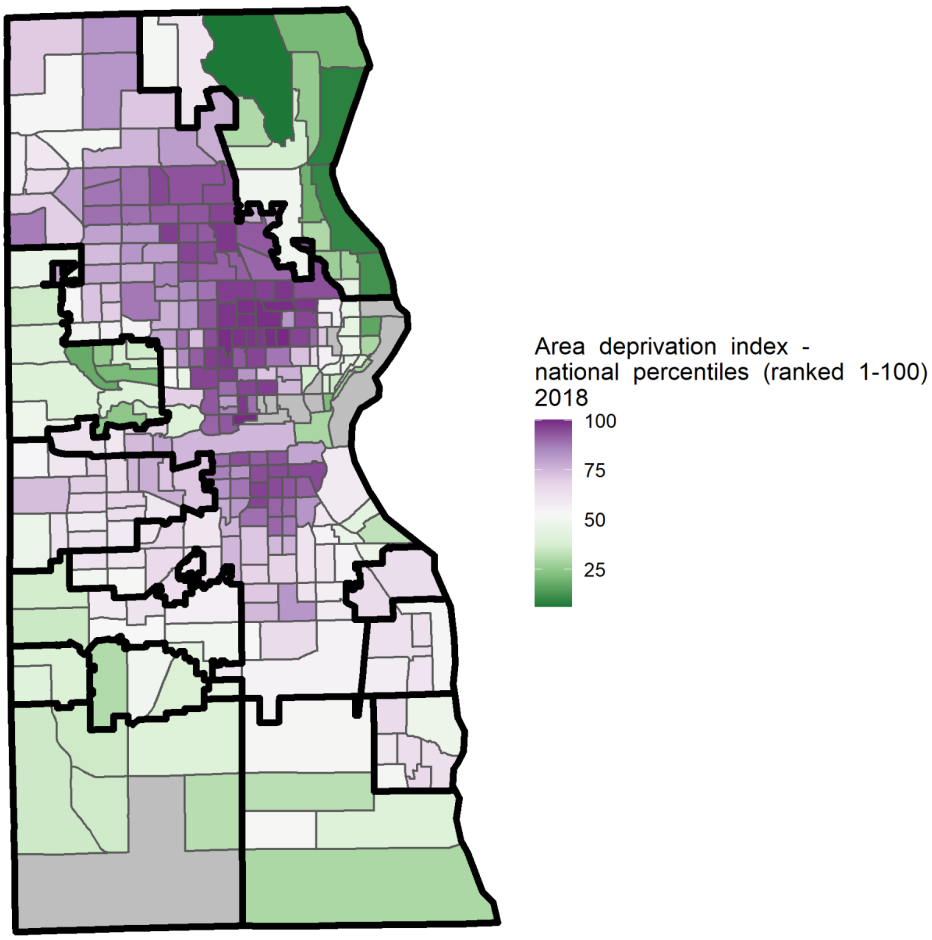
Non-fatal Drug Overdoses



Source: Wisconsin Department of Health Services

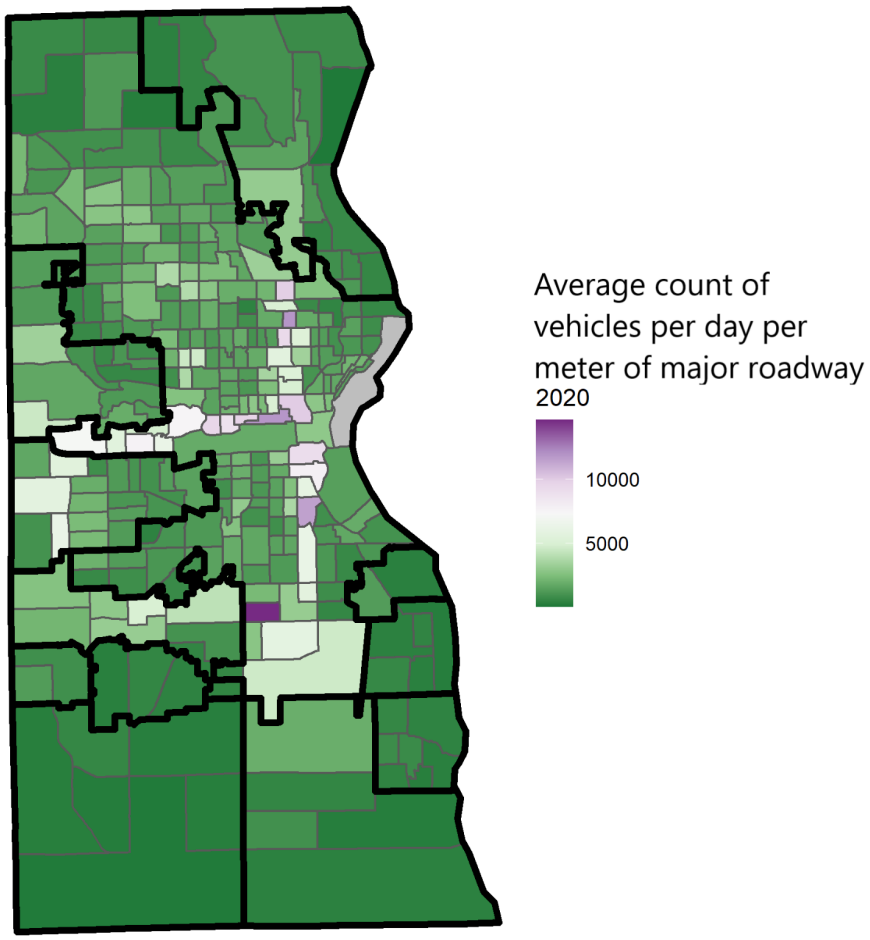
Health Department	Area Deprivation Index - national percentiles	Average count of vehicles per day per meter of roadway
	Median Census Tract (Range: Min-Max)	
Cudahy	61.33 (54.00-63.00)	326 (210-549)
Franklin	35.33 (31.33-39.75)	237 (117-533)
Greendale	38.25 (30.50-49.33)	366 (277-484)
Greenfield	46.67 (35.00-58.33)	2374 (466-3095)
Hales Corners	39.67 (38.67-40.67)	1033 (810-1257)
Milwaukee	79.30 (16.33-100.00)	1525 (191-14644)
North Shore	27.17 (6.00-60.80)	761 (72-3036)
Oak Creek	36.00 (29.50-52.33)	414 (210-857)
South Milwaukee	64.25 (47.50-66.50)	426 (238-1270)
Wauwatosa	37.00 (17.33-48.00)	1211 (559-4494)
West Allis	64.58 (46.67-76.75)	1329 (792-6209)
Source:	Neighborhood Atlas 2018	EJSCREEN 2020

Area Deprivation Index



Source: Neighborhood Atlas

Proximity to Traffic



Source:EJSCREEN

Appendix B: History and political context

Municipalities	***History and political context***
Cudahy	*History:* In the early 1800s, the Buckhorn railroad stop opened on the land that would eventually become the city of Cudahy. In the 1830s the federal government began selling the land around Buckhorn and the Cudahy brothers bought 700 acres to build their meatpacking plant. As the company grew through the late 1800s, many of the area's residents were workers for the Cudahy Brothers (https://www.cudahyhistoricalsociety.org/cudahy-history). Cuday incorporated as a village in 1895 and then as a city in 1906 during the "second phase" of annexation in Milwaukee County when it was easier for independent communities to receive public services from the city of Milwaukee. The city's borders grew after WWII when Milwaukee sought to expand its borders and many communities in the county resisted annexation. Cudahy, anxious not to lose territory to Milwaukee, annexed part of the town of Silverdale despite stiff opposition. (https://emke.uwm.edu/entry/cudahy/) (https://emke.uwm.edu/entry/annexation/) Both the Cudahy family and its meatpacking company remained influential in the city into the 20th Century, with the Cudahy company even supplying the city's water (https://emke.uwm.edu/entry/cudahy/). This led to tensions, however, when the city's official elected leadership sometimes clashed with the vision and desires of the Cudahy's. Although the Cudahy Packing Company was sold in the 1980s, meatpacking remains a major industry in the community. This can present a unique set of public health needs and concerns, as it did most recently during the COVID Pandemic when Smithfield's Cudahy plant was closed due to an outbreak. (https://urbanmilwaukee.com/2020/04/18/smithfields-cudahy-meat-packing-plant-closed/)
	Politics: Democratic presidential candidates have won a majority of votes in Cudahy in every election since at least 1992. However, the city has grown less Democratic compared to other municipalities in the county: in 1992 Cudahy was more than 15 points more Democratic than the average municipality in Milwaukee County, in 2020 it was 15 points more Republican. Trump had the strongest performance of any Republican in the city, losing Cudahy by only 6.4 points in 2016.
Franklin	*History:* Franklin began as a Civil Township in the 1830s and remained a mostly rural farming community for the next 100 years. The discovery of lime deposits launched a local mining industry in the 1930s. Franklin's growth took off in the 1950s when the post-WWII housing

	boom saw the construction of two new low-cost housing developments. (https://emke.uwm.edu/entry/franklin/) Following Oak Creek's successful incorporation as a city and the passage of the "Oak Creek Law," many Franklin residents sought to incorporate as a city. In 1956, at the height of Milwaukee's efforts to annex unincorporated territory and suburban resistance, Franklin citizens overwhelmingly passed a resolution to incorporate as a city (https://emke.uwm.edu/entry/franklin/). According to the local historical society, Franklin only met the 10,000-person population requirement to become a 4th class city because Milwaukee County had decided to build a county corrections facility in the township (https://franklinhistory.net/buildings/). Like every municipality in Milwaukee County, Franklin confronted difficulties during the COVID19 Pandemic. One case that tested the limits of the municipal health department arose when a number of employees at a Franklin meatpacking plant tested positive. The Franklin City public health department reported that because many of the workers lived outside of city limits, the department was unable to track their case and determine whether they had contracted COVID at work in Franklin (https://www.jsonline.com/story/news/2020/08/09/strauss-accused-firing-workers-after-covid-19-safety-complaints/3327237001/).
	Politics: Franklin is among the most Republican municipalities in Milwaukee County, it has been carried by Republican candidates in every presidential election since at least 1992. The last few election cycles, however, have seen some movement toward Democratic presidential candidates: Joe Biden (who lost the city by 8 points) had the best performance of a Democrat since 1996.
Greendale	*History:* Unlike some Milwaukee County municipalities which evolved slowly from rural communities to small towns to suburbs over decades, Greendale was built from scratch in the 1930s by the Federal Government. As part of the Roosevelt Administration's "Greenbelt Towns Program," Greendale was designed to provide affordable housing, accessible greenspace, and a close-knit civic life to people on the outskirts of Milwaukee. This promise of community, health, and quality of life, however, was always restricted. In the time that Greendale citizens rented their homes directly from the Federal Government, the village maintained a rigorous vetting process for new residents, minimum required incomes for renters, and restrictive covenants designed to keep Black families out of the village (https://emke.uwm.edu/entry/greendale/).

	In 1949, the Federal Government began to divest itself from Greendale, enabling residents to buy the home they had been renting. Local leaders also came together to form a development corporation to purchase the public buildings, businesses, and undeveloped land in the community. Even after this transfer was completed in 1952, some evidence suggests that restrictions on development and racially restrictive covenants continued to limit the growth and racial diversity of Greendale (https://dc.uwm.edu/cgi/viewcontent.cgi?article=1177&context=eti_pubs). Greendale's Health Department was founded in 1939 shortly after the village's incorporation. Over the next several decades the Health Department grew and diversified its services along with the changing needs of the community (https://www.greendale.org/departments/health_department/about_the_health_department.php).
	Politics: Greendale has traditionally been quite Republican, especially compared to other Milwaukee County municipalities. George W. Bush carried Greendale by more than 15 points in both 2000 and 2004, and as recently as 2012 Mitt Romney carried the city by more than 10 points. However, in 2020, Joe Biden became the first Democrat to carry the city in more than 30 years.
Greenfield	*History:* Although the town of Greenfield was surveyed for settlement in the 1830s (https://www.ci.greenfield.wi.us/1068/About-Our-City), and the land witnessed more than a century of development and urbanization, the city was one of the last in the area to incorporate. The prior annexation of land to establish West Allis, West Milwaukee, Hales Corners, and Greendale, meant that when Greenfield incorporated in 1957 it was only one-third its original size. According to the Encyclopedia of Milwaukee, the freeway running through the middle of Greenfield, its multiple zip codes and school systems, and its lack of major local industry are remnants of this later development. (https://emke.uwm.edu/entry/greenfield/)
	Politics: In the 1990s, Greenfield was slightly more Democratic than the average municipality in Milwaukee County. However, since 2004, Greenfield has been 10 or more points more Republican than the average municipality. 2020, when Joe Biden carried the city by 4 points, was a Democrat's best performance in the city since 1996 and the first time they had carried the city since 2008.
Hales Corners	*History:* In the 1830s, when the Federal Government began selling off land in Milwaukee County, the Hale brothers and their father bought three of four corners on an intersection of the

	"Janesville Road." Growing agricultural traffic on the Janesville Road brought commercial and residential development to the area. The area gained its name Hales Corners after William Hale became the first postmaster of the town (https://www.halescorners.org/index.asp?SEC=247E2388-AA54-4593-BE56-F206682047A4). As technological innovation transformed the Janesville Road into a highway for automobiles, Hales Corners continued to grow with auto-repair shops and car dealerships furthering local development. In 1914, Hales Corners became an unincorporated village and began developing its own local infrastructure. By 1952, despite still being somewhat rural, Hales Corners incorporated as a village to avoid annexation by Milwaukee. Over the next five years, Hales Corners continued to grow through several more annexations of nearby land and developed municipal government, infrastructure, and services like a health department. (http://www.halescornershistory.com/hales-corners-village-history/)
	Politics: Hales Corners is consistently among the most Republican municipalities in Milwaukee County with Republican presidential candidates regularly performing 15-25 points better in Hales Corners than in the average municipality in the county. While a Democrat has not carried the city in at least 30 years, Joe Biden came the closest of any recent candidate when he lost the city by only 5 points.
Milwaukee City	*History:* The first official towns were established in Milwaukee in the 1830s and in 1846 three towns, with a total population of more than 20,000, combined to incorporate as the city of Milwaukee. Successive waves of immigrants from Germany, Poland, Ireland, and elsewhere drove Milwaukee's population growth in the late 19th and early 20th centuries. At the same time, foundries, factories, and breweries transformed Milwaukee into in an industrial and economic center (https://www.wisconsinhistory.org/Records/Article/CS1607) As Milwaukee's population grew, so too did its conflict with nearby communities. During the first years of the 20th century the City of Milwaukee allowed outlying communities to buy into the city's utilities but retain their independence. This changed after the 1916 election of Socialist mayor Daniel Hoan who sought to aggressively expand the city's boundaries in order to increase the quality of life of Milwaukee residents. Economic devastation and a failed attempt at city-county consolidation stalled annexation attempts in the 1930s and early 1940s. But rapid population growth after WWII spurred another round of competition over land in Milwaukee County, with the city of Milwaukee and surrounding suburbs competing to annex or incorporate outlying communities. This led to an expansion of Milwaukee's boundaries and the development of a number of new suburbs, forming what Milwaukee leadership called "an iron ring" that prevented urban expansion. By the early 21st

	century, no unincorporated land remained in Milwaukee County (https://emke.uwm.edu/entry/annexation/)
	Politics: Milwaukee has long been a Democratic stronghold and one of the most Democratic cities in the state. Democratic strength has only continued to increase in recent elections. In 1990s, Democratic presidential candidates won the city of Milwaukee by 30-40 points. Since 2008 that margin has grown to nearly 60 points. Locally, Milwaukee has had only Democratic mayors for more than 50 years.
North Shore	*History:* Today, the North Shore Health Department covers seven municipalities: Bayside, Brown Deer, Fox Point, Glendale, River Hills, Shorewood and Whitefish Bay. While each of these municipalities has a unique story, they share elements of a common history. In the mid-1800s, this area developed into the townships of Milwaukee, Granville and Lake. Throughout the late 1800s and early 1900s, the North Shore remained largely rural and lightly populated, combining farmland with vacation homes, amusement parks, and recreational activities for Milwaukee's wealthier residents. Beginning in the 1890s, communities in the North Shore Area began to incorporate as independent villages and cities. In 1892, frustrated by the distance their children had to travel to school, Whitefish Bay became the first village to incorporate and start its own local school district (https://emke.uwm.edu/entry/whitefish-bay/). Believing that the Town of Milwaukee (which was led primarily by rural leaders) was not investing in local infrastructure, East Milwaukee followed Whitefish Bay and incorporated in 1900 before changing its name to Shorewood in 1917. Driven by a similar interest in establishing local services and keeping tax revenue within the community, Fox Point incorporated in 1926 (https://emke.uwm.edu/entry/village-of-fox-point/#:~:text=Fox%20Point's%20first%20school%20opened,summer%20homes%20in%20the%20community) and River Hills in 1930 (https://emke.uwm.edu/entry/village-of-river-hills/). Many of these communities were strictly zoned to prevent dense housing and industry, this helped to maintain nearly exclusively residential, more rural and often wealthier communities. In the 1950s the City of Milwaukee and the North Shore municipalities competed to annex or incorporate the remaining unincorporated territory in the area. Glendale first tried to incorporate in 1946, but was met with resistance from Milwaukee leadership. After a lengthy court battle, Glendale ultimately incorporated as a village in 1950 (https://emke.uwm.edu/entry/city-of-glendale/). Shortly thereafter, Brown Deer (https://www.browndeerwi.org/371/History) and Bayside (https://emke.uwm.edu/entry/village-of-bayside/) were founded in 1953 and grew through a series of annexations in the 1950s. While these newer suburbs were more industrial and

	denser than some of the previous North Shore communities, they successfully stopped the expansion of Milwaukee and secured political independence and local control for North Shore residents. Due to their relative proximity and small size, North Shore communities have often shared resources and infrastructure throughout their history. School districts span different North Shore municipalities, and the area shares a fire department. Starting in the early 1990s, the same coordination has defined North Shore's public health work. First, in 1993 Whitefish Bay and Shorewood established a joint health department. Then in 1996, Bayside, Brown Deer, Fox Point, Glendale, and River Hills established their own consolidated health department. Beginning in 2006, the two health departments explored how they could best coordinate and cooperate, and by 2012 each of the municipalities had voted to adopt one joint health department for the entire North Shore community (https://www.nshealthdept.org/AboutUs.aspx#).
	Politics: Every one of the North Shore municipalities has undergone a dramatic political transformation in the last 30 years. In the early 90s, some of these municipalities (Bayside, Glendale, Shorewood) were won by Democrats by 10-20 point margins, while others (Fox Point, Brown Deer, River Hills, Whitefish Bay) were won by Republicans. By 2020, every one of these municipalities had swung toward Democrats by 40-points or more, with the most Democratic (Shorewood) giving Biden a 67 point margin and the most Republican (River Hills) still seeing Trump lose by 14 points. The overall change in the average Milwaukee municipality is largely driven by these dramatic Democratic gains on the North Shore.
Oak Creek	*History:* While the town of Oak Creek was founded in 1840, and its population steadily grew throughout the next century, it was not until the 1950s that Oak Creek became a major player in Wisconsin municipal history (https://www.oakcreekwi.gov/resident/about-our-city/our-city-s-unique-history). During this time, two things collided to reshape the relationship between Oak Creek and Milwaukee. First, facing population growth and overcrowding, Milwaukee began its "Fourth Phase" of annexation, seeking to expand its territorial boundaries (https://emke.uwm.edu/entry/annexation/). Second, the construction of a major power plant in Oak Creek promised to bring economic development, growth, and utility tax revenues to the town. Milwaukee strove to annex Oak Creek to gain land and the benefits of the power plant; many Oak Creek residents strove to incorporate and preserve revenue and political control for Oak Creek. Oak Creek leaders launched a campaign to change the state law and allow Oak Creek residents to vote to incorporate. This became a multi-year campaign that included everything from town officials going into hiding to avoid legal action from Milwaukee, the delivery of incorporation papers to the State Legislature in secret, and

	a protracted legal fight. Ultimately, this resulted in the court upholding the "Oak Creek Law" that made it easier for smaller suburbs to incorporate (Cech 2005). This fight had long-lasting consequences for both Milwaukee and Oak Creek, and for public health in particular. Oak Creek's incorporation (along with that of several other suburbs) contributed to what Milwaukee political leaders called the "iron ring" of suburbs that prevented the city from expanding to mitigate problems like overcrowding and housing scarcity. For Oak Creek, the decision to become a city geographically and economically centered on a major power plant has continued to pose some concerns. As Jim Cech writes in his history of Oak Creek, the city faced an internal struggle in the early 2000s when some in the city fought for the power plant's expansion to better serve the community and its economy, while others opposed it fearing the health consequences for those who lived near a potentially toxic industry (Cech 2005).
	Politics: Presidential Elections are nearly always closely divided in Oak Creek: only twice in the last 30 years (2000 and 2004) has a presidential candidate won the city by more than 10 points. Oak Creek is always more Republican than the average municipality and that divide has grown larger in recent years. A Democrat has not won Oak Creek since 1996, Joe Biden's performance in the city (losing by only 3.4 points) was the best for a Democrat since 2008.
South Milwaukee	*History:* South Milwaukee began in the late 1800s as a group of Milwaukee business and industry leaders sought a new industrial area outside of city limits. The land, at the time part of the Oak Creek township, was ideal due to its proximity to the railroad and the lake. In 1892, the city incorporated as a village. By 1897, in part because of the decision of the Bucyrus Foundry and Manufacturing Company to relocate to the community, South Milwaukee was large enough to incorporate as a city. (https://smwi.org/378/South-Milwaukee-History) As South Milwaukee grew into an industrial and manufacturing powerhouse in the early decades of the 20th Century, it confronted new public health challenges. The city separated from the Milwaukee Metropolitan Sewage District and developed its own methods for collecting stormwater and treating waste. In 1915, South Milwaukee pioneered the first water filtration system on the Great Lakes to provide water to the city. Beginning with Grant Park, the County's first park, the construction of parks and greenspace were vital to South Milwaukee's early efforts to provide a quality of life to its citizens. (https://smwi.org/378/South-Milwaukee-History)
	Politics:

	While South Milwaukee is consistently Democratic (Democratic presidential candidates have won it every election since at least 1992), it has grown less Democratic compared to other municipalities in the county. In the 1990s South Milwaukee was 10 points more Democratic than the average Milwaukee County municipality, in 2016 and 2020 it was nearly 20 points below the average Democratic performance. Trump's performance in the city in both elections was the best of any Republican in 30 years.
St. Francis	*History:* Worries about annexation into Milwaukee and the struggles of striking out on its own have shaped St. Francis since its beginning. For the city's 25th Anniversary, a local historian describes the thinking in the early 1950s: "Civic leaders in the Town of Lake had been watching Milwaukee nibbling off bits and pieces of the township for years and they were alarmed. They did not dislike their giant neighbor so much as they sought a voice in their own affairs. A sense of Community led to incorporation for St. Francis in 1951." (https://stfranciswi.org/history) First, the city had to hold its incorporation meetings in secret in order to avoid annexation plans from the city of Milwaukee. Then, once the city was established, city residents found that "Just being a city did not solve problems." In its early decades, the city confronted issues of receiving financial credit, building infrastructure, and developing local services. The difficulty of doing this alone led to attempts at one point to dissolve the city and consolidate with its neighbors. (https://stfranciswi.org/history) Perhaps this difficulty of managing the local needs of a relatively small city in Milwaukee County is reflected in the fact that St. Francis has already combined its health department with South Milwaukee.
	Politics: St. Francis is consistently quite Democratic, with Democratic presidential candidates winning the city often by 10-20 points. While in the 1990s the city was quite a bit more Democratic than the average Milwaukee County municipality, in more recent elections it has been just below the average. Joe Biden's performance in St. Francis in 2020 (winning by 20 points) was a Democrat's best performance in the city since 1996.
Wauwatosa	*History:* Milwaukee residents began to settle in what would become Wauwatosa in 1835 and the community became a separate town in 1842. The community incorporated as a village in 1892 and (following a massive reconstruction after a fire) became the first 4th Class city in Wisconsin in 1897. The city quickly grew, drawing new residents from Milwaukee and elsewhere. To manage this growth, Wauwatosa became the second city in the state to adopt a zoning ordinance, one designed to limit industrial growth and protect the residential quality of life. (https://www.visitmilwaukee.org/wauwatosa/about-wauwatosa/wauwatosa-about-history/)

	Wauwatosa's next major expansion came in the 1950s. Worried about Milwaukee's rapid growth, its desire to expand its boundaries, and the city's limited access to water, Wauwatosa annexed nearby unincorporated territory and nearly tripled its size. (https://www.wisconsinhistory.org/Records/Article/CS2402). Milwaukee retaliated by trying to cut off access to municipal water in Wauwatosa. This fight over public infrastructure, annexation and, both Milwaukee and Wauwatosa's growth, historian Tula Connell argues, was informed by both partisan opposition to Milwaukee's "big government" liberalism and anxiety about Milwaukee's growing racial diversity. Citing several 1950s editorials from the *Wauwatosa News-Times*, Connell shows Wauwatosa leaders worrying about Milwaukee's generous welfare policies encouraging Black migration to the city, creating a "dependence on Government [that] has encouraged the inevitable human inertia that sapped people's initiative," and that these urban ills might spread to Wauwatosa (Connell 2016).
	Politics: Wauwatosa has seen a dramatic change in its politics over the last 30 years. Republicans won every presidential election in the city from 1992 – 2004, often by more than 10 points. Since 2008, however, Democrats have carried the city every time. This has been particularly significant in 2016 when the city swung 20 points to Democrats and 2020 when the city swung another 12 points giving Joe Biden a margin of nearly 35 points.
West Allis	*History:* While early development began in the 1830s, the birth of contemporary West Allis came in the 1890s with the choice to build the State Fairgrounds in the area and the Milwaukee Street Car Company's expansion of service to the community. This facilitated the growth of several industrial operations, the largest among them the Edward P. Allis Company. Its population growth driven in part by employees of the Allis company, when the community incorporated first as a village in 1902 and then as a city in 1906, they chose West Allis as its name. WWI spurred both West Allis' economic development and population growth, and the early decades of the 20th century saw the development of the city's sanitation, infrastructure, and health department. (https://www.westalliswi.gov/393/History-of-West-Allis). An early history of West Allis emphasizes the desire of the city's founders to protect the health of its residents: "The Allis people not as other companies sought cheap land in low and unhealthy surroundings, but located high and dry, assuring the workman a healthy place to work and live in" (Brubach 1912). Like its neighbor Wauwatosa, West Allis' desire for a healthy, suburban community put it in tension with a growing Milwaukee in the 1950s. With much of its property zoned for industry and commerce, West Allis struggled to have enough space to build residential homes for its citizens. In 1954, Milwaukee sought to expand its borders while other new cities were incorporating, and some like West Allis annexed unincorporated territory to

	double its size (https://westallishistory.org/history-of-west-allis-wisconsin/). Connell argues that West Allis' resistance to Milwaukee's growth and its drive to annex more land reflected partisan conflict and racial resentment. Connell cites West Allis' Common Council explaining their opposition to an encroaching Milwaukee by saying it was, "predicated on an aversion to big city government, its undue concentration of political power, and other inherent infirmities" (Connell 2016). While Connell emphasizes the race and class character of this language, it is also informed by a vision of health. There are "inherent infirmities" in the city of Milwaukee, while West Allis sees itself as a city prizing its health—a health that is dependent on separation from Milwaukee.
	Politics: Elections in West Allis are often closely contested, with Democrats usually carrying the city by single-digit margins. In the 1990s the city was more Democratic than the average municipality in the county, but today it is somewhat more Republican than average. However, Biden's performance in 2020 (winning by 11 points) was the best showing by a Democrat since 1996.