CHAPTER 9: PUBLIC HEALTH

With a rise in chronic disease occurring across the developing world, there is a renewed effort around the US and the world to reconnect Urban Planning and Public Health to create healthier communities. Early pioneers in both fields pushed to intervene in the built environment in ways that remain the backbone of municipal governments, sanitary infrastructure, land use zoning, and the provision of public greenspace. While much of this early work occurred over a century ago, the built environment continues to play a significant role in determining health outcomes for communities and individuals.

Designing healthy communities is a well-established sub-field in public health, urban planning, engineering, and design with significant research pointing towards actionable solutions to improve a community's health and well-being. Built environments that support physically active, socially engaged, mentally well, and economically successful residents occur through smart design, careful planning, and a commitment to equity. Providing opportunities to achieve a high quality of life for all residents is a process that involves engagement of the public sector, private sector, community groups, and individuals. To accomplish this, the barriers created by the built environment must be reduced at the same time that access to the essential places and spaces of daily life are improved.

This introductory section will provide background on how health is influenced by the built environment as well as analysis of Janesville's built environment to identify barriers that influence residents' decisions to drive cars versus using active transportation modes. Based on this history and analysis, a framework of quality of life is used to inform policies, programs and initiatives in the second volume of this comprehensive plan update that reduce barriers and increase access to a healthy, active life for Janesville residents.

This chapter has been added to the 2021-2022 Comprehensive Plan update to respond to a call from the COJ Plan Commission, Rock County Health Department, and other stakeholders to address public health through the City of Janesville's long-range planning and comprehensive plan process. The format of this section includes:

Section 1: Planning for Health in Janesville's Built Environment

Section 2: Health and Long-Range Planning

- A brief history of health and urban planning
- Health and neighborhood design
- Janesville's Built Environment

Section 3: Health Outcomes in Janesville

- Social determinants of health
- State of health in Janesville
- Framework for health equity in planning

Section 4: Key Planning Issues and Opportunities

KEY DEFINITIONS

Health[1]

The life expectancy and quality of life[2], including physical well-being, mental well-being, social well-being, and economic well-being, experienced by people.

Built Environment[3]

The physical buildings, site designs, and population densities where people live, work, and play, the transportation infrastructure people and goods use to move between places, and the mixture of land uses that create neighborhoods, commercial districts, industrial districts, and parks or greenspace.

Social Determinants of Health[4]

"the non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems"

Active Transportation[5][6]

Walking, Biking, and the walk to and from transit stops for leisure or "utilitarian" purposes, such as commuting to work, running errands, walking to the park, walking household pets, and visiting social places.

SECTION 1: PLANNING FOR HEALTH IN JANESVILLE'S BUILT ENVIRONMENT

(Re) energize! Janesville – 2014 Community Health Plan

In 2012, the Rock County Health Department requested funding to develop a plan to reduce community exposure to brownfield site contaminants and improve health outcomes through redevelopment strategies in the Downtown area of Janesville. Through collaboration between the City of Janesville, Rock County Health Department, the Wisconsin Department of Health Services, and the Agency for Toxic Substances and Disease Registry, along with a robust community engagement process *(Re)Energize Janesville* was created in 2014. This plan identified ten priority issues to target for improving health outcomes, several which were integrated into the 2016 *ARISE Plan* for Downtown Janesville.

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[1] University of Wisconsin - Population Health Institute. (2021). | *What Is Health?* County Health Rankings & Roadmaps. https://www.countyhealthrankings.org/what-is-health

[2] Lee, R. J., & Sener, I. N. (2016). Transportation planning and quality of life: Where do they intersect? *Transport Policy*, *48*, 146–155. https://doi.org/10.1016/j.tranpol.2016.03.004

[3] US EPA - Office of Sustainable Communities: Smart Growth Program. (2013, June). *Our Built and Natural Environments: A Technical Review of the Interactions Between Land Use, Transportation, and Environmental Quality* (2nd Edition). US Environmental Protection Agency. https://www.epa.gov/smartgrowth/our-built-and-natural-environments

[4] World Health Organization. (2019, May 30). Social determinants of health. World Health Organization (WHO). https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1

[5] Wanner, M., Götschi, T., Martin-Diener, E., Kahlmeier, S., & Martin, B. W. (2012). Active Transport, Physical Activity, and Body Weight in Adults. *American Journal of Preventive Medicine*, *42*(5), 493–502. https://doi.org/10.1016/j.amepre.2012.01.030

[6] Iroz-Elardo, N., Schoner, J., Fox, E. H., Brookes, A., & Frank, L. D. (2020). Active travel and social justice: Addressing disparities and promoting health equity through a novel approach to Regional Transportation Planning. *Social Science & Medicine*, *261*, 113211. https://doi.org/10.1016/j.socscimed.2020.113211

Priority Issue from (Re)Energize Janesville	**General Status**
Janesville's Poor Image and Lack of Community Connectedness	Largely integrated into 2016 *ARISE Plan*
Brownfield Sites	Several Downtown, and south side, sites have been remediated and either redeveloped or are primed for redevelopment.
River Access	Significantly improved through creation of Downtown Janesville "Town Square" and pedestrian bridge.
Old and Vacant Buildings	While several buildings have been demolished, many others have been rehabilitated and are no longer vacant.
River Water Quality	Uncertain
Unemployment/Lack of Jobs	Janesville, Rock County, and Wisconsin are experiencing a record low level of unemployment with substantial job openings available to the workforce.
Healthy Eating	Successful downtown farmers market, several area community gardens are in existence, UW Extension offers Healthwise education programming, Rock County Public Health has created a Nutrition Collaborative to address food access issues.
Inactivity and Obesity	Continued expansion of off-street recreational trails and increased bicycle usage across Janesville's off-street trail network
Personal and Physical Safety	Janesville is experiencing low crime rates.
Affordable and Safe Housing	River Flats Apartments was constructed in Downtown Janesville, a program exists to support housing maintenance program for older neighborhoods. Both topics remain ongoing issue

The *(Re)Energize Janesville* plan largely focused on the Downtown Area and incorporated a wide range of issues related to community health. The plan sought to generate activity among a number of area actors to help drive a revitalization of the Downtown area and has been largely successful in a

number of areas. With the downtown revitalization well underway, addressing the ongoing issues of community health shaped by the built environment have again arisen as being a primary interest of the City of Janesville, Rock County Health Department, and citizens alike.

Comprehensive Plan Update 2021

In summer 2020, the City of Janesville Planning Division conducted an analysis of the 2009 Comprehensive Plan and the City of Janesville Zoning Code to determine how well these development tools and regulations supported health outcomes through the built environment[7]. The analysis looked for specific measures, actionable policies, and best practices that support healthy, active living through transportation networks, general community development goals, and specific site and building design standards. The results of this analysis indicated that the City of Janesville already supports a number of best practices while having a number of opportunities to better support health outcomes. In section 3, analysis is presented that identifies core issues and opportunities in Janesville's land use patterns and transportation network.

In consultation with Rock County Health, the City of Janesville Plan Commission, and other stakeholders, the feedback generated from public outreach events and the findings of this section were synthesized with research related to health and the built environment along with elements from the health chapter in the City of Eau Claire's 2015 comprehensive plan. A set of recommendations was generated from this process that served as a starting point for collaboration between the City of Janesville and Rock County Health Department in updating this comprehensive plan.

SECTION 2: HEALTH AND LONG-RANGE PLANNING

History of health in urban planning

The health and well-being of people and communities was an acute issue in American cities during the 19th and 20th centuries. Urbanization and industrialization provided employment opportunities while also leading to population growth that concentrated large numbers of people in areas with poor infrastructure. Health risks abounded from the lack of proper sanitary systems and clean water, to the conflict between industrial land use and residential dwellings, and from the high densities of people living in challenging physical, economic, and social conditions[8][9]. These conditions precipitated a range of responses from health, planning, and municipal advocates.

Sewer Systems and Water Treatment.

The lack of sewer systems to manage human waste meant that many cities did not have reliable, safe drinking water[10]. Cities on the East Coast, including Philadelphia, New York, and Boston, were

[7] Using a Healthy Living and Active Design scorecard created for the state of Delaware.
Healthy Living Scorecard. (2016). Cedar Creek Sustainable Planning Services. http://www.cedarcreekplanners.com/portfolio_page/healthy-living-scorecard/

[8] Kochtitzky, C., Frumkin, H., Rodriguez, R., Dannenberg, A. L., Rayman, J., Rose, K., Gillig, R., & Kanter, T. (2006, December 18). *Urban Planning and Public Health at CDC*. Centers for Disease Control. https://www.cdc.gov/mmwr/preview/mmwrhtml/su5502a12.htm

[9] Kling, S. (n.d.). *Design and Health in Historical Perspective: American City Parks in the Late 19th Century*. Northwestern Public Health Review. Retrieved September 26, 2021, from https://sites.northwestern.edu/nphr/design-and-health-in-historical-perspective-american-city-parks-in-the-late-19th-century/

[10] Schultz, S. K., & McShane, C. (1978). To Engineer the Metropolis: Sewers, Sanitation, and City Planning in Late-Nineteenth-Century America. *The Journal of American History*, *65*(2), 389. https://doi.org/10.2307/1894086

some of the earliest places to develop infrastructure to supply residents with clean water and did so in the late 18th and early 19th century[2].

Advances in the understanding of microbiology coincided with outbreaks of water-borne diseases, such as typhoid, to create momentum to reform local government and address the health threats posed by urbanization[2]. By the early 20th century, most cities had installed sewer systems to handle the outflow of waste and water[2]. Cities such as Milwaukee and Chicago developed treatment systems for water and for sewage in response to ongoing water-borne disease outbreaks in the early 20th century[1112].

Parks and Greenspace

The extreme conditions created through industrialization, the mixing of land uses and the lack of effective sanitation infrastructure coincided with the inequality faced by many inhabitants of industrial cities. Booming cities like Chicago were rife with poverty, conflict, and disease[2]. The views of early leaders and reformers, such as Frederick Law Olmsted, suggested that physical health and social health problems of residents were the result of the built environment [2]. One of the solutions was to create public places that exemplified the beauty and awe of wilder, green places. Parks served as both respite from the clutter and congestion of street life as well as being a cosmopolitan space that provided opportunities for people to experience difference across cultures and class[2].

Land Use and Zoning Regulations

With early development of many cities occurring prior to effective local governance[7], land uses, such as residential, commercial, and industrial areas, were often blended together creating conflict that lead to poor health outcomes for residents. The famous constitutional case of *Ambler Realty v. Village of Euclid, Ohio* created a legal standard for restricting development that poses health and safety standards[13]. In that case, housing was proposed to be built in an area directly adjacent to a factory but a city zoning ordinance prohibited this development. The Village of Euclid argued that factories, among other land uses, posed acute dangers to people residing near to them and so was in the right in regulating land use. Not long after the *Euclid* ruling, the 1924 Standard Zoning Enabling Act created a national framework for zoning regulations[7].

Much of this early development and mixing of residential and commercial land uses, created "traditional neighborhoods" that continue to provide vibrant places of social and economic life. The mixed land uses in early 20th century urban cores are often preserved and help to create a distinct sense of history, such as in Downtown Janesville and the First Settlement neighborhood in Madison. Additionally, the legacy of mixed industrial uses within the neighborhood blending is still apparent in places like Janesville where residential, industrial, and commercial land uses intertwine along Center Ave and W Court St, as well as along Main Street and Parker Drive Downtown.

Summary

The health and social problems of the earliest industrial cities gave rise to some of the most impactful urban planning and public health initiatives. The creation of land-use and zoning ordinances sought to address the problems of environmental exposure, the creation of modern sanitation systems and water treatment facilities significantly reduced the risk of acquiring water-borne diseases,

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[11] *Sanitation in Chicago*. (2005). Encyclopedia of Chicago. http://www.encyclopedia.chicagohistory.org/pages/300017.html

[12] *History of the Milwaukee Water Works*. (n.d.). Milwaukee Water Works. Retrieved September 26, 2021, from https://city.milwaukee.gov/water/customer/FAQs/additionalinfo/History-of-the-Milwaukee-Water-Works.htm

[13] Atlanta Regional Health Forum, Atlanta Regional Commission, Fallon Jr, L. F., & Neistadt, J. (2006). *Land Use Planning for Public Health*. National Association of Local Boards of Health. https://www.cdc.gov/healthyplaces/publications/landusenalboh.pdf

and the first investments in greenways and parklands gave urban places much of the quality of life experienced today[1]. These interventions in land use and the built environment helped to create the fields of Urban Planning and Public Health and continue to serve as the backbone of municipal government services around the US.

Health and Neighborhood Design

A reaction to the problems created in industrial cities was the rise of suburban development[7], with detached single-family homes built on larger lots, a less connected street grid, and being mainly accessible to city centers by way of the automobile, streetcar, or bus. Zoning regulations provided a legal framework for separating residential areas from those of industry and commerce, while the private automobile allowed workers greater freedom in accessing the employment market outside of their neighborhood. Out of the same progressive era that saw significant municipal reforms like zoning, the concept of the American Dream, an aspiration for "equality, justice, and democracy" arose[14]. By the middle of the 20th century this dream became intertwined with that of upward social mobility[15] and with living in single-family houses with yards and a quieter feel than urban centers[16].

In suburban places, with housing located further from the workplace, from grocery stores, from public gathering places, and generally being lower density, people's access to vital everyday places become determined by their access to an automobile. Suburban neighborhood designs affect the social life of communities[17] and the ways people take part in physical activity. The dream of single-family neighborhoods comes with the built-in risk factor that many chronic health conditions are correlated with sedentary living and being physically inactive[18].

The walkability of a neighborhood and the overall access to destinations and services have been shown to be positively associated with adults being physically active generally[19], along with walking places more than driving[20]. Men have been shown to have better mental health symptoms in more walkable neighborhoods[21] and being physically active can improve mental health conditions

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[14] Diamond, A. (2018, September 20). *The Original Meanings of the "American Dream" and "America First" Were Starkly Different From How We Use Them Today*. Smithsonian Magazine. https://www.smithsonianmag.com/history/behold-america-american-dream-slogan-book-sarah-churchwell-180970311/

[15] Churchwell, S. (2021). *A Brief History of the American Dream*. Bush Center. https://www.bushcenter.org/catalyst/state-of-the-american-dream/churchwell-history-of-the-american-dream.html

[16] Filippino, M. (2017, December 4). *Levittown and the rise of the American suburb*. The World from PRX. https://www.pri.org/stories/2017-12-04/levittown-and-rise-american-suburb

[17] Wood, L., Shannon, T., Bulsara, M., Pikora, T., McCormack, G., & Giles-Corti, B. (2008). The anatomy of the safe and social suburb: An exploratory study of the built environment, social capital and residents' perceptions of safety. *Health & Place*, *14*(1), 15–31. https://doi.org/10.1016/j.healthplace.2007.04.004

[18] Wang, Y., Chau, C., Ng, W., & Leung, T. (2016). A review on the effects of physical built environment attributes on enhancing walking and cycling activity levels within residential neighborhoods. *Cities*, *50*, 1–15. https://doi.org/10.1016/j.cities.2015.08.004

[19] Barnett, D. W., Barnett, A., Nathan, A., van Cauwenberg, J., & Cerin, E. (2017). Built environmental correlates of older adults' total physical activity and walking: a systematic review and meta-analysis. *International Journal of Behavioral Nutrition and Physical Activity*, *14*(1). https://doi.org/10.1186/s12966-017-0558-z

[20] Ewing, R., & Cervero, R. (2010). Travel and the Built Environment. *Journal of the American Planning Association*, *76*(3), 265–294. https://doi.org/10.1080/01944361003766766

[21] Berke, E. M., Gottlieb, L. M., Moudon, A. V., & Larson, E. B. (2007). Protective Association Between Neighborhood Walkability and Depression in Older Men. *Journal of the American Geriatrics Society*, *55*(4), 526–533. https://doi.org/10.1111/j.1532-5415.2007.01108.x

including reduced anxiety[22], stress, and depression[23]. When people walk for utilitarian purposes, such as commuting to work or going grocery shopping, they tend to visit other locations while they are away from home[24], creating an active street life while also providing a critical mass of people on the street that appears to alter driver behavior, reducing automobile crashes near busy intersections[25].

Neighborhood design has also been shown to influence the social life of residents. A study of residents in Galway, Ireland found that residents whose neighborhood had more destinations within walking distance from their home reported greater social capital, or trust, with their neighbors than did residents in more car-dependent areas[26]. Conversely, residents living in suburban neighborhoods with conventional street designs, such as longer blocks with lower intersection density and the presence of cul de sacs, were shown to have higher levels of social capital than neighborhoods with more traditional street networks. Both of these studies suggest there are benefits to the social life of a place in the design of neighborhoods that need to be balanced with the attendant health risks of car-dependent places. The design and development of suburban neighborhoods was a reaction to the extreme conditions of overcrowded industrial cities. The problems of overcrowding, land use conflict, lack of greenspace, and lack of sanitary infrastructure were in large part remedied in these new places while they also created new ways for the built environment to influence public health.

[22] Ohmatsu, S., Nakano, H., Tominaga, T., Terakawa, Y., Murata, T., & Morioka, S. (2014). Activation of the serotonergic system by pedaling exercise changes anterior cingulate cortex activity and improves negative emotion. *Behavioural Brain Research*, *270*, 112–117. https://doi.org/10.1016/j.bbr.2014.04.017

[23] Fox, K. R. (1999). The influence of physical activity on mental well-being. *Public Health Nutrition*, *2*(3a), 411–418. https://doi.org/10.1017/s1368980099000567

[24] Millward, H., Spinney, J., & Scott, D. (2013). Active-transport walking behavior: destinations, durations, distances. *Journal of Transport Geography*, *28*, 101–110. https://doi.org/10.1016/j.jtrangeo.2012.11.012

[25] Jacobsen, P. L. (2003). Safety in numbers: more walkers and bicyclists, safer walking and bicycling. *Injury Prevention*, *9*(3), 205–209. https://doi.org/10.1136/ip.9.3.205

[26] Leyden, K. M. (2003). Social Capital and the Built Environment: The Importance of Walkable Neighborhoods. *American Journal of Public Health*, *93*(9), 1546–1551. https://doi.org/10.2105/ajph.93.9.1546

Janesville's Built Environment

Walking along W. Milwaukee St or Main St in Downtown Janesville illustrates a textbook example of a pedestrian-scale and walkable built environment. Building fronts abut the sidewalk and street edge, storefronts are visible and inviting to passersby, both Main St and Milwaukee St have traffic calming designs that enhance the pedestrian experience, and the average user does not need to use their car to experience the full range of amenities provided Downtown. Parking occurs either on the street or in lots set apart from the commercial spaces themselves. This area provides a healthy mixture of active design elements that encourage more active forms of transportation, particularly for residents who park once and walk or live within a short walking or biking distance.

The accessibility map centered on Downtown Janesville and W. Court St illustrates this with ample green bicycle paths and green pedestrian paths. While Downtown Janesville is an excellent example of the type of urban form that supports active transportation modes, not all of Janesville is as accessible. Just west of Downtown along W. Court St the experience for a bicyclist or pedestrian changes significantly. These areas are more stressful for the user and much of the commercial and retail locations are set far back from the road with parking in front of them. This form serves car traffic relatively well but can be quite imposing for someone using their feet, bicycle, or the bus. While this may seem like a relatively minor inconvenience for the majority of residents who use their car to get around town, the only full-service grocery store in the near Downtown area is located along W. Court St and is largely inaccessible by bicycle and foot traffic. Bus service does run through this area and this likely provides a lifeline for residents without cars.

The area along Milton Ave (Hwy 26) and Humes Rd (Hwy 14), Center Avenue (Hwy 51), and other areas of employment and containing essential everyday places present a similarly imposing environment for people who are not using their car. All of these areas are accessible by private automobiles but each have unique barriers to being accessed in more physically active ways and for residents who experience transportation disadvantages of some form.

Given the lack of walkable, bikeable everyday places, it is not surprising that Janesville ranks as one of the most car dependent places in Wisconsin and the US. Data provided by the US Department of Transportation in partnership with Centers for Disease Control indicate the share of workers commuting by car in Janesville, ranks in the bottom third of the US for the health impact of this commute mode, at the 33rd percentile[27]. This indicator is 15% lower than Wisconsin as a whole. Walking as a commute option impacting health is at the 43rd percentile, 31% lower than WI, and biking is at the 34th percentile, 56% lower than the state as a whole.

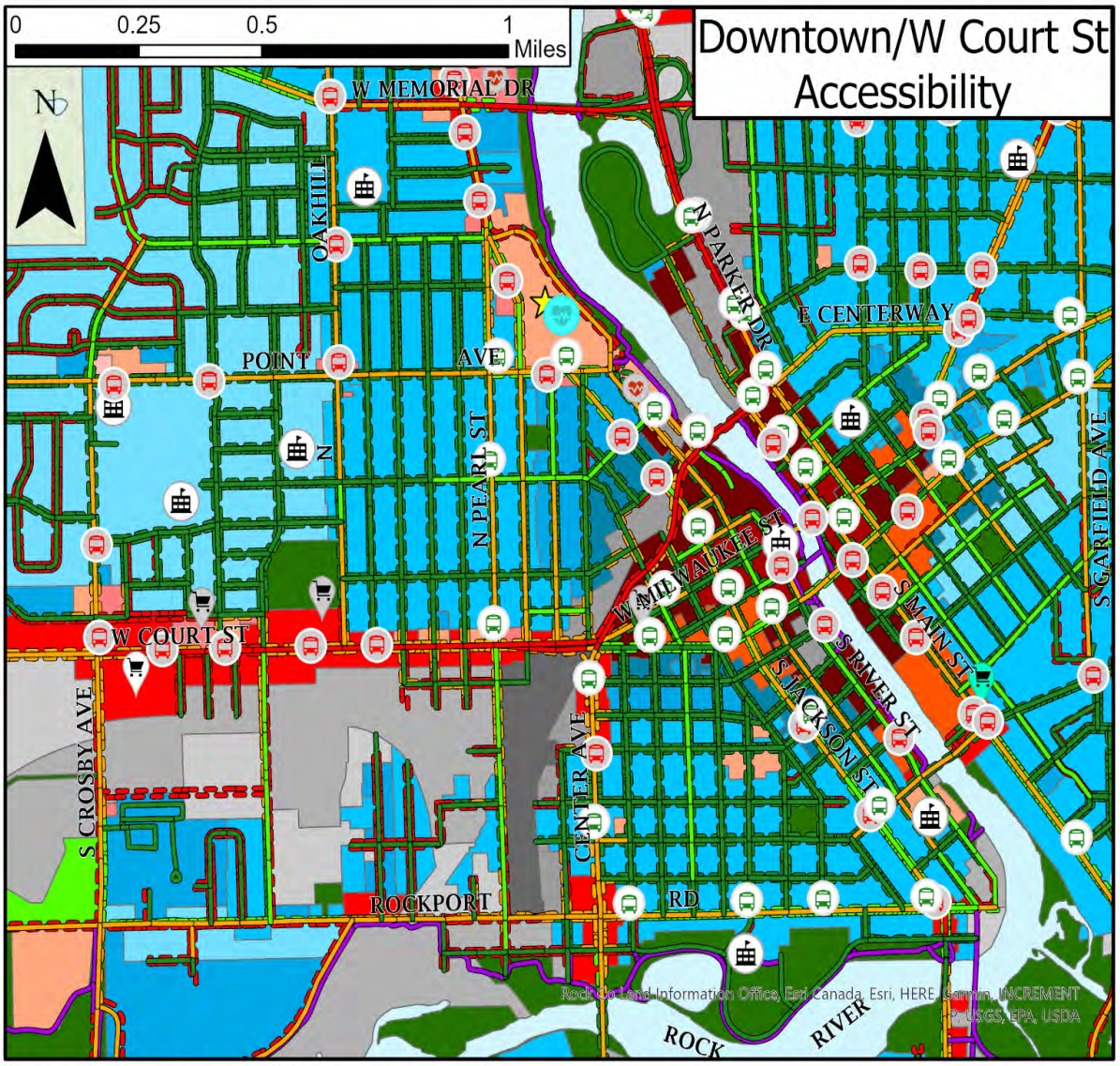
Conclusion

The history of Janesville is one of 19th century settlers creating a small city along the banks of the Rock River[28]. These early settlements laid the foundation for a pedestrian scale central city that was planned around in 1920 with John Nolen creating Janesville's first City Plan. Successive waves of development spread outwards in response to the freedom of movement created by automobiles and the desire for more single-family homes on larger lots. While this history has created the Janesville that residents know and love, Janesville is still a small city that is expected to grow only modestly over the timeframe of this plan. Working to reduce the car dependent nature of Janesville's built

27 US Department of Transportation & Centers for Disease Control. (2015). *Transportation and Health Indicators* [The Transportation and Health Tool (THT) was developed by the U.S. Department of Transportation and the Centers for Disease Control and Prevention to provide easy access to data that practitioners can use to examine the health impacts of transportation systems.]. https://www.transportation.gov/transportation-health-tool

28 Rock County Historical Society. (n.d.). *History of Janesville | Janesville, WI*. History of Janesville | City of Janesville, WI. Retrieved September 29, 2021, from https://www.janesvillewi.gov/about-janesville/history-of-janesville

environment is a large-scale intervention that will provide a greater equity in the quality of life and health outcomes for current and future residents.



Janesville Transit Stops
- Day/Night Service
- Night Service Only
- Daytime Service Only

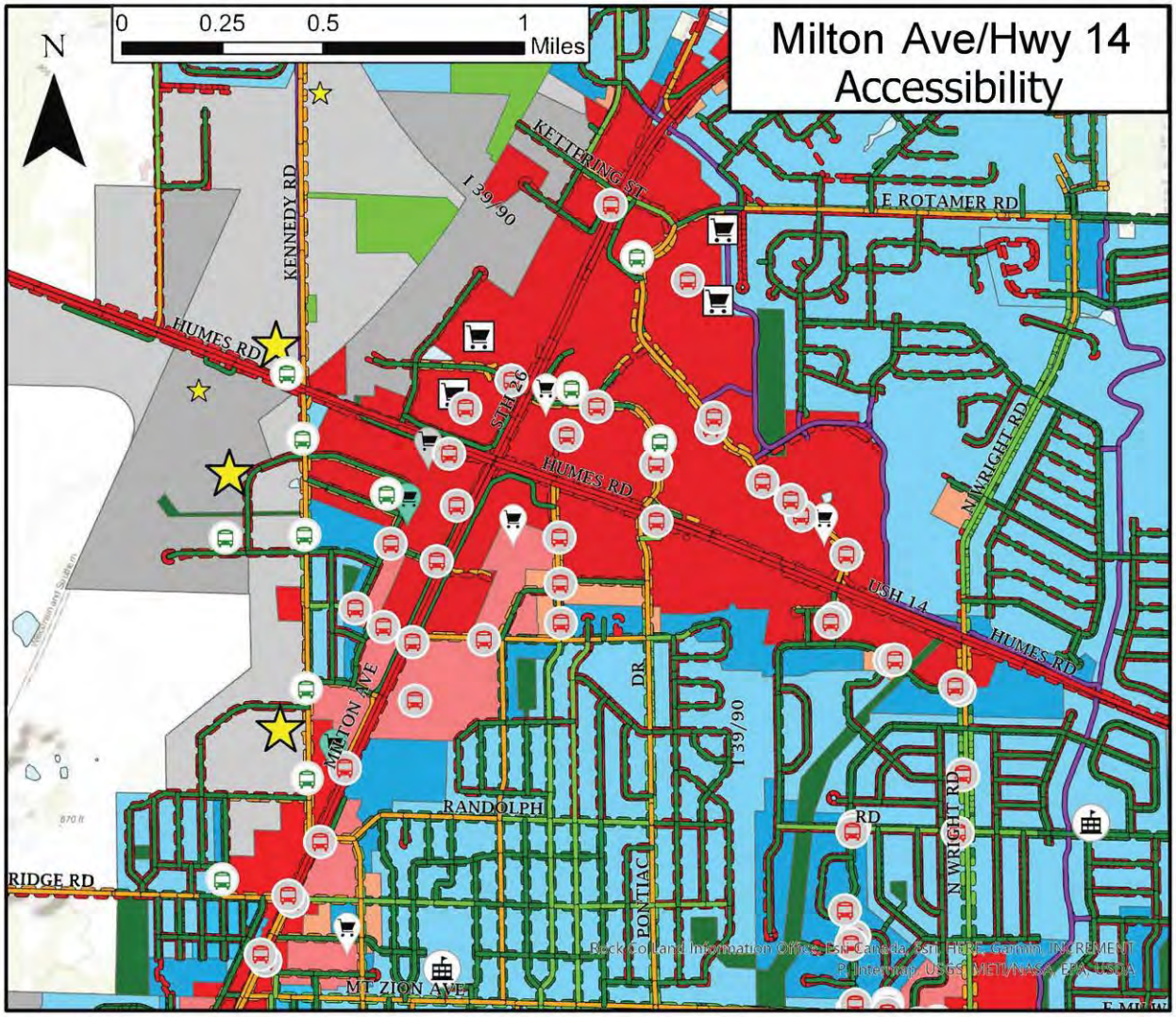
Essential Daily Places
- Hospital
- Clinic
- Major Employer
- School
- Grocery
- Dollar Store
- Specialty Grocery
- Big Box Grocery

Pedestrian Accessibility
- Low Stress - Children, Adults
- Low Stress - Adults
- Stressful
- Extremely Stressful

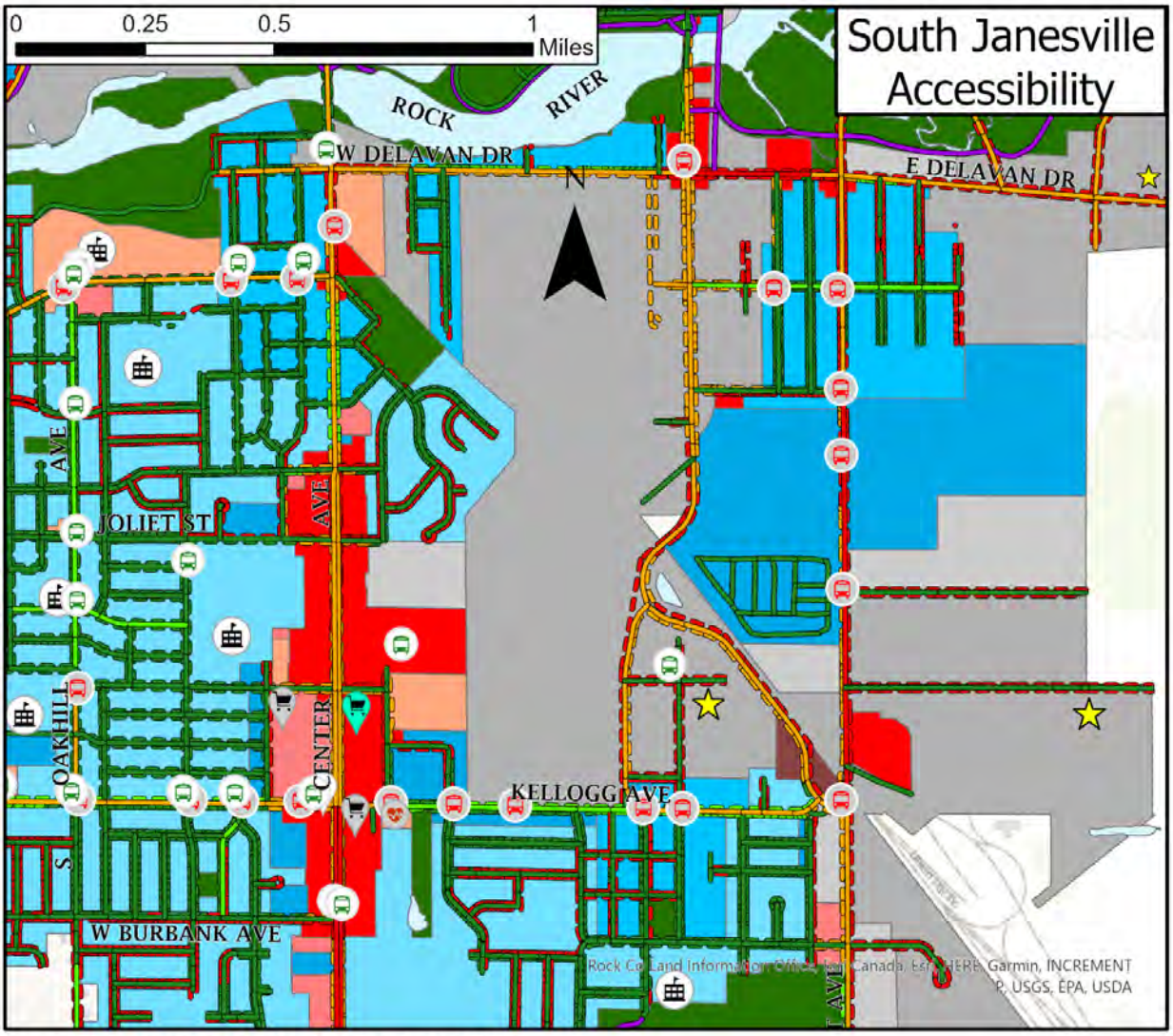
Bicycle Accessibility
- Low Stress - Trail
- Low Stress - All Cyclists
- Some Stress - Most Cyclists
- Stressful - Limited Cyclists
- Extremely Stressful - Fearless Only

Land Use
- Residential
- Commercial/Retail - Walkable
- Commercial/Retail - Car-centered
- Office
- Industrial
- Greenspace
- Water

Source: City of Janesville Planning Division



Source: City of Janesville Planning Division



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Land Use
- Residential
- Commercial/Retail - Walkable
- Commercial/Retail - Car-centered
- Office
- Industrial
- Greenspace
- Water

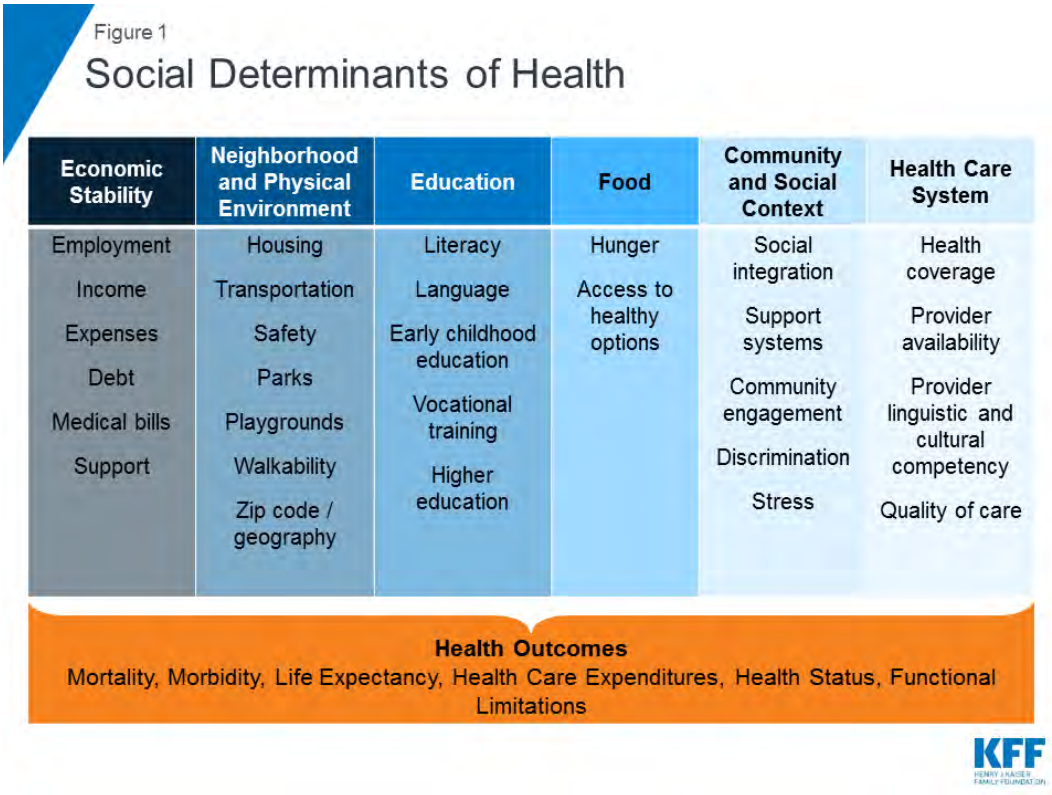
Source: City of Janesville Planning Division

HEALTH OUTCOMES IN JANESVILLE

Social Determinants of Health

In 2018, over a quarter of adults (27.2%) in the US experienced two or more chronic health conditions[29]. This figure has increased by 24% since 2001 when 1 out of 5 adults (21.8%) experienced multiple chronic health conditions. The built environment influences people's health in ways that are not directly related to a person's physiology or genetics with chronic disease being particularly influenced by physical aspects of a person's environment. These social determinants of health are "the conditions, in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life"[30]. The figure below categorizes different types of health determinants and indicates the overall health outcomes influenced by social determinants of health.

Figure 1



In reconnecting public health with urban planning, the interventions sought occur in the built environment. The built environment can be defined as the physical buildings, site designs, and population densities where people live, work, and play, the transportation infrastructure people and goods use to move between places, and the mixture of land uses that create neighborhoods, commercial districts, industrial districts, and parks or greenspace[31]. The way these urban forms vary within, and between, cities creates a wide range of experiences for people and affects their health outcomes differently.

[29] Boersma P, Black LI, Ward BW. Prevalence of Multiple Chronic Conditions Among US Adults, 2018. Prev Chronic Dis 2020;17:200130. DOI: http://dx.doi.org/10.5888/pcd17.200130

[30] "the non-medical factors that influence health outcomes. They are the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily life. These forces and systems include economic policies and systems, development agendas, social norms, social policies and political systems" World Health Organization. (2019, May 30). Social determinants of health. World Health Organization (WHO). https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1

[31] US EPA - Office of Sustainable Communities: Smart Growth Program. (2013, June). *Our Built and Natural Environments: A Technical Review of the Interactions Between Land Use, Transportation, and Environmental Quality* (2nd Edition). US Environmental Protection Agency. https://www.epa.gov/smartgrowth/our-built-and-natural-environments

State of Health in Janesville

The CDC reports that "90% of the nation's $3.8 trillion in annual health care expenditures are for people with chronic and mental health conditions" and $146 billion a year in health care costs are related to obesity. Nationally, 19% of children and 42% of adults experience obesity (or a body mass index of greater than 30), which is a significant risk factor for chronic disease such as diabetes, heart disease, and some cancers (CDC, 2021). In Wisconsin, the percentage of people who experience obesity is 14.2% for children, 27th worst out of 51 states ranked, and 34% for adults, 17th worst out of 51 states ranked (*Adult Obesity Rates*, 2020).

The table below provides a snapshot of health data from the CDC Behavioral Risk Factor Surveillance System, which conducts telephone surveys and estimates population health issues based on self-reporting by adults. The Janesville area averages are color coded in relationship to Wisconsin's averages. Red and Orange means Janesville reports worse health outcomes, or very similar outcomes, to Wisconsin as a whole. Green means Janesville reports better outcomes.

Estimated percent of adults reporting[32]	Janesville Area Average[33]	Rock County Average	WI Average	US Average
Life expectancy at birth[34]	78.09	77.9	79.3	78.7
Overweight (BMI >=24.9)[35]	67.1%	67.7%	68.1%	65.9%
Obesity (BMI >=30)[4]	32.7%	33.0%	32.0%	30.9%
Heavy Drinking[4]	30.4%	30.0%	27.9%	21.6%
Smoker (current or former)[4]	44.6%	43.9%	42.7%	39.9%
Physical Inactivity (within last 30 days) [36]	23.5%	23.8%	42.4%	29.5%
Eat less than one serving of fruits and vegetables per day[5]	16.3%	16.4%	15.9%	16.4%
High Blood Pressure (ever diagnosed)[5]	28.9%	29.5%	30.8%	32.4%
Diabetes (ever diagnosed)[4]	8.2%	8.5%	8.7%	11.4%
High Cholesterol (ever diagnosed)[5]	30.6%	30.8%	35.3%	35.3%
Heart Disease (ever diagnosed)[4]	3.6%	3.6%	3.8%	4.3%
Stroke (ever diagnosed)[4]	2.4%	2.4%	2.4%	3.4%

[32] A caveat to this data. These are estimates based on a self-report of household health issues and not values or rates measured by health professionals. Additionally, these values may not be wholly representative of the entire Janesville community due to limitations in the survey sample size.

[33] This area is the Janesville Metropolitan Planning Area (MPA) which is the most focused level of analysis possible using census tracts and is the jurisdictional level at which Transportation planning in the Janesville area occurs. This area includes the City of Janesville and Milton and the Townships of Janesville, Harmony, La Prairie, Milton, and Rock.

[34] Source: CDC, 2010-2015

[35] Source: Policymap and CDC BRFSS; Year: 2018

[36] Source: Policymap and CDC BRFSS; Year: 2017

The Janesville Area reports lower life expectancy and worse rates of risk factors including being a current or former smoker and reporting heavy drinking than Wisconsin. Janesville also reports better health outcomes in several of the chronic diseases associated with sedentary living and the prevalence of obesity[27].

Mapping Janesville's Health

The information presented in the previous table indicates that Janesville may be performing better than Wisconsin as a whole on a number of health outcomes. However, when these health outcomes are spatialized, a different story appears (see the following maps). Janesville residents experience numerous health disparities depending on which neighborhoods they reside in. One of the most significant disparities is life expectancy at birth. People born to households on the periphery of Janesville are predicted to live 6 years longer than people born in Janesville's center city.

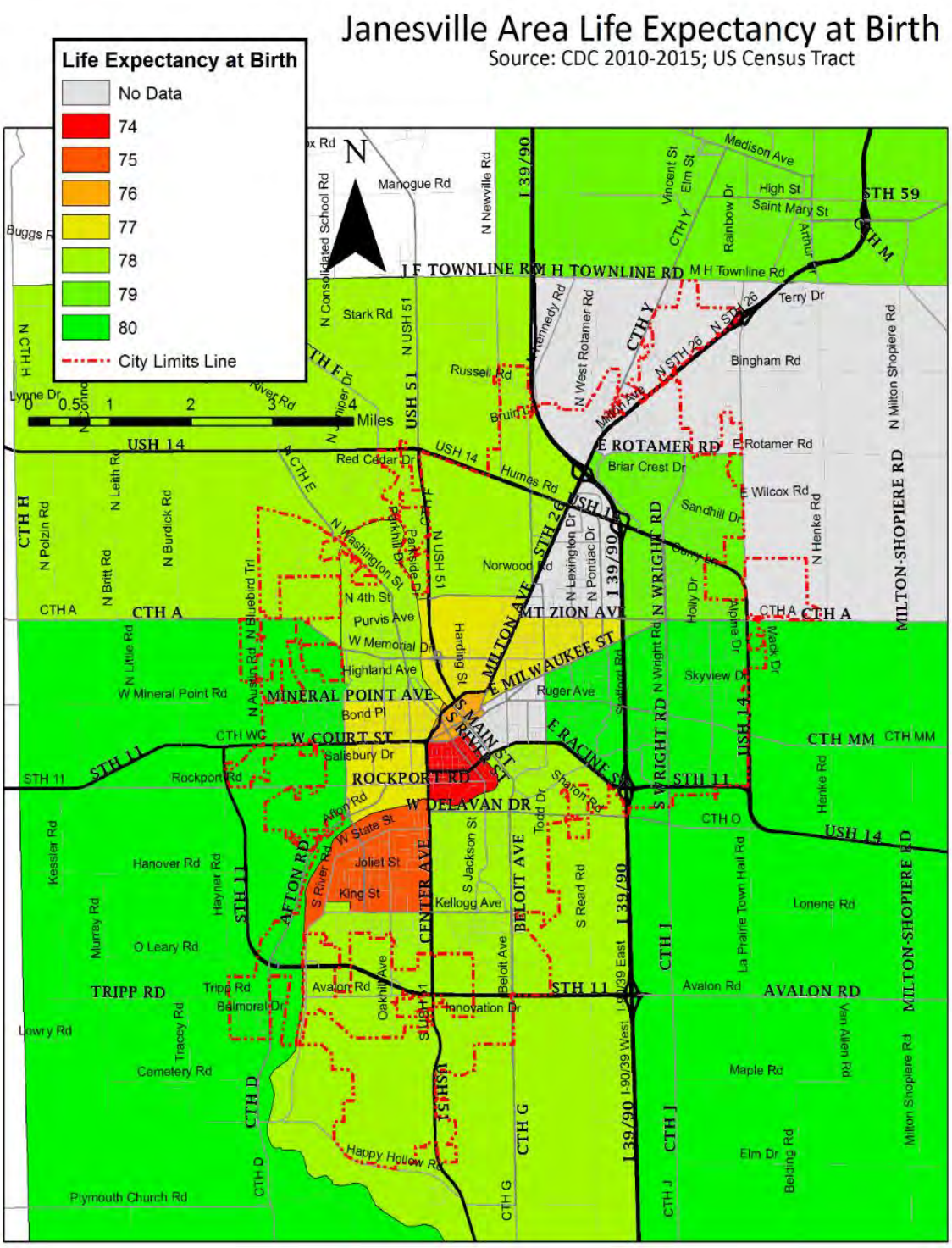
Another disparity appears when considering rates of physical activity and high blood pressure rates. Physical activity is known to help reduce blood pressure, which in turn reduces the risk of cardiovascular health problems[37] and chronic disease more generally[38].

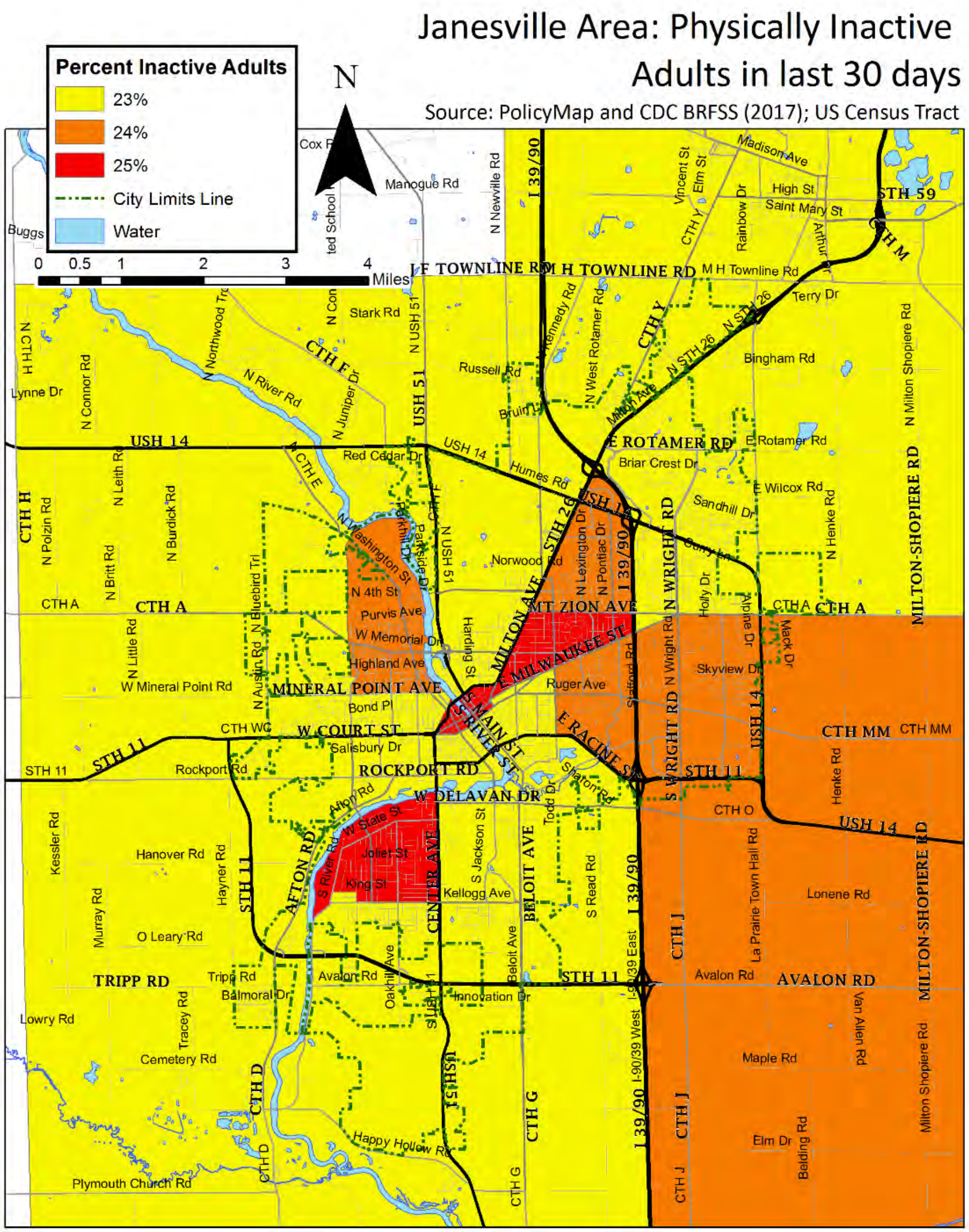
The final example shows the connection between poverty, residential opportunity, and access to food, in the form of full-service grocery stores. Neighborhoods with the highest concentration of poor residents are also likely to live further from full-service grocery stores.

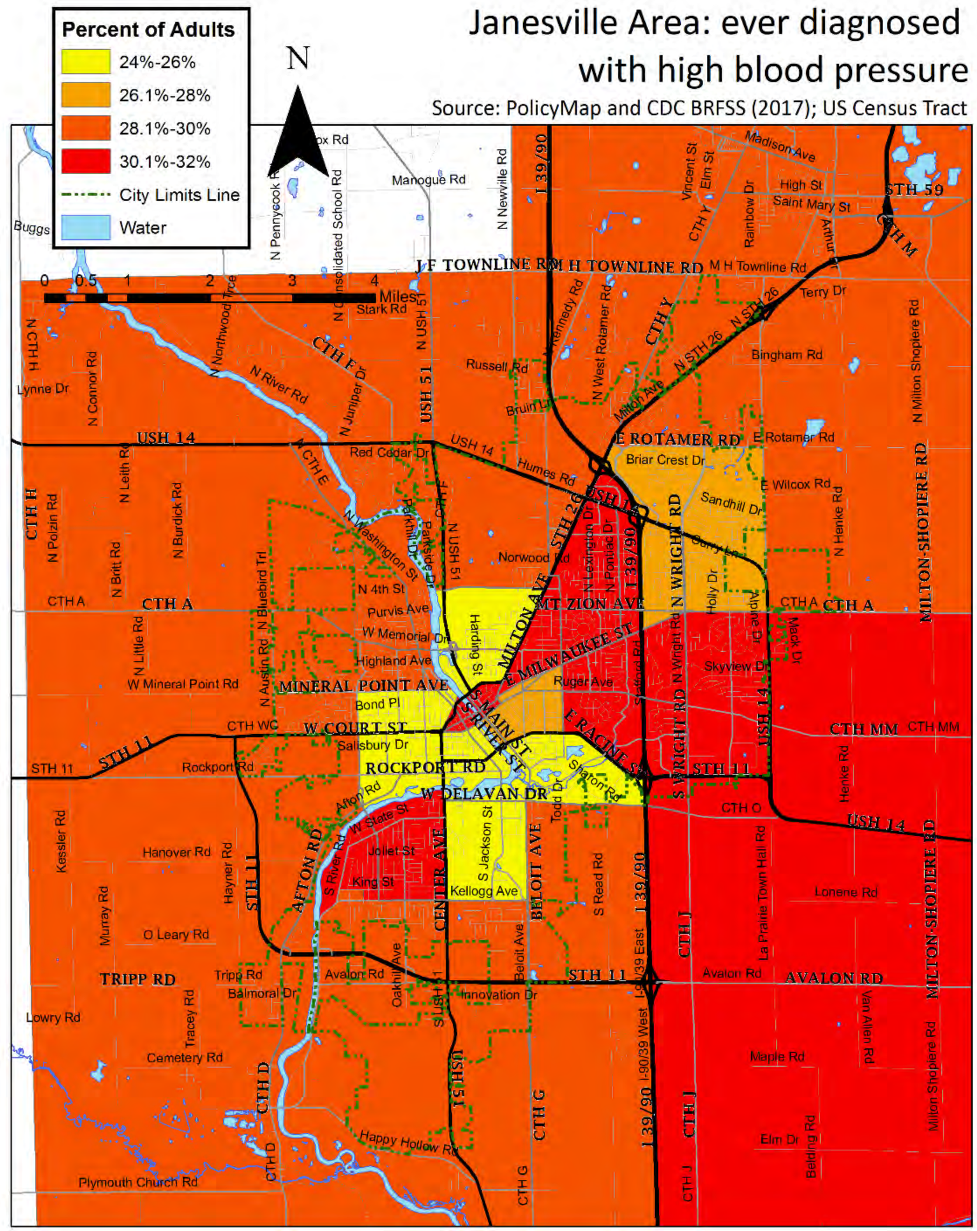
When taken together, the residents of Janesville experience disparities in their opportunities for experiencing a high quality of life. Spatial, economic, class, and racial segregation impacts residents differently, with the health of Janesville's residents in a complicated state of affairs.

[37] Mayo Health Clinic. (2021, July 1). *High blood pressure (hypertension) - Symptoms and causes*. Mayo Clinic. https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/symptoms-causes/syc-20373410

[38] Mayo Health Clinic. (2020, November 11). *Exercise and chronic disease: Get the facts*. Mayo Clinic. https://www.mayoclinic.org/healthy-lifestyle/fitness/in-depth/exercise-and-chronic-disease/art-20046049?reDate=28092021

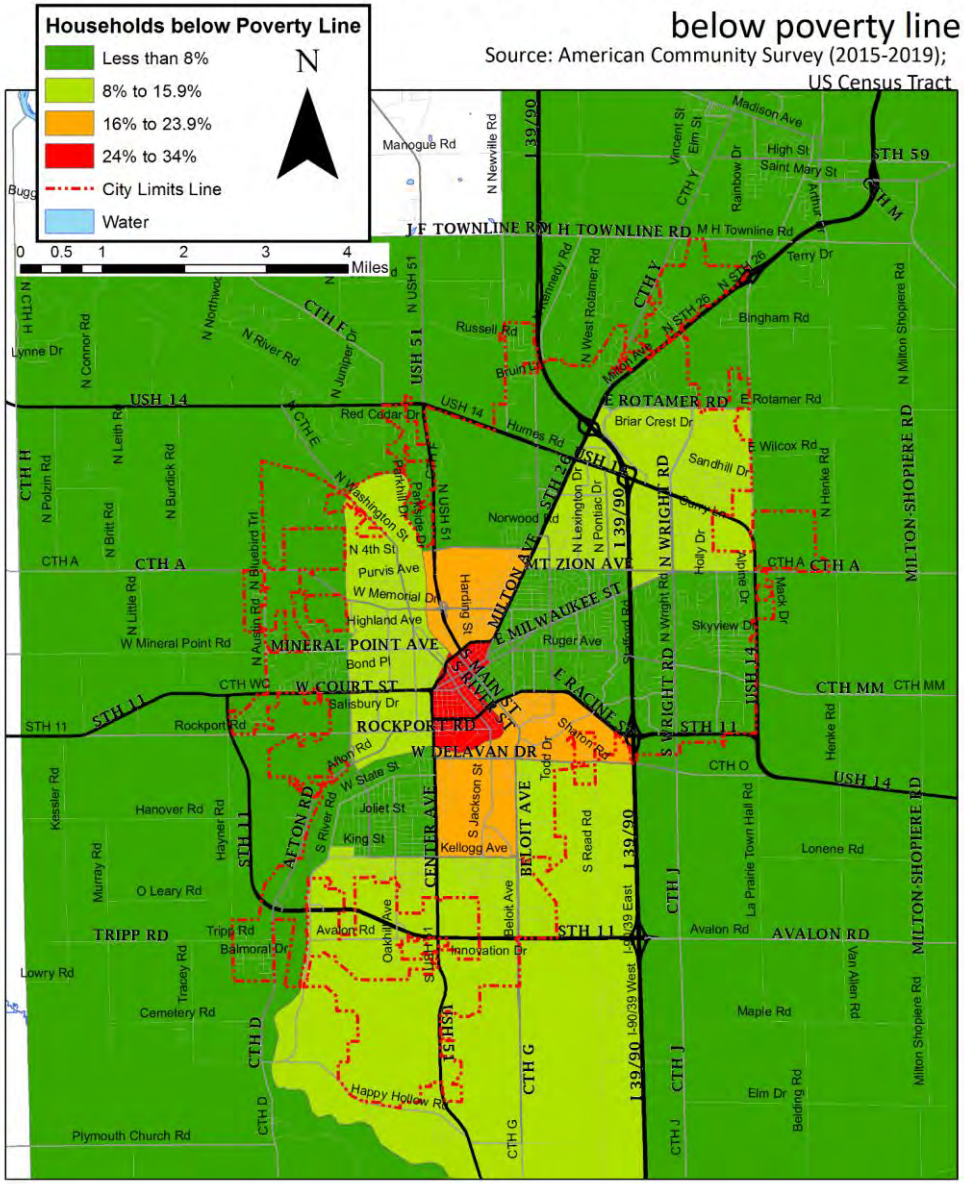

Janesville Area Life Expectancy at Birth
Source: CDC 2010-2015; US Census Tract
Life Expectancy at Birth
No Data
74
75
76
77
78
79
80
City Limits Line
0 0.5 1 2 3 4 Miles
N
Manogue Rd
I 39/90
N Newville Rd
Madison Ave
Vincent St
Elm St
High St
Saint Mary St
Rainbow Dr
Arthur St
STH 59
CTH M
CTH Y
M H TOWNLINE RD
M H Townline Rd
Terry Dr
N STH 26
Bingham Rd
N West Rotamer Rd
Kennedy Rd
N Consolidated School Rd
Stark Rd
N USH 51
Russell Rd
Bruin Ln
Lynne Dr
Juniper Dr
Rivers Rd
USH 14
Red Cedar Dr
Humes Rd
E ROTAMER RD
E Rotamer Rd
Briar Crest Dr
E Wilcox Rd
Sandhill Dr
N Henke Rd
MILTON-SHOPIERE RD
N Milton Shopiere Rd
CTH H
N Polzin Rd
N Leith Rd
N Britt Rd
N Burdick Rd
N Bluebird Trl
N Washington St
Parkhill Dr
Parkside Dr
Norwood Rd
N Lexington Dr
N Pontiac Dr
STH 26
N WRIGHT RD
Holly Dr
Mark Dr
CTH A
N 4th St
Purvis Ave
W Memorial Dr
MT ZION AVE
MILTON AVE
E MILWAUKEE ST
Harding St
Highland Ave
N Little Rd
W Mineral Point Rd
N Austin Rd
MINERAL POINT AVE
Bond Pl
Ruger Ave
Slatford Rd
Skyview Dr
CTH WC
W COURT ST
S RIVER ST
S MAIN ST
E RACINE ST
CTH MM
Salisbury Dr
ROCKPORT RD
Rockport Rd
STH 11
Shalom Rd
W DELAVAN DR
Todd Dr
CTH O
USH 14
Henke Rd
Kessler Rd
Hanover Rd
Haynes Rd
Murray Rd
O Leary Rd
W State St
Joliet St
King St
S River Rd
AFTON RD
CENTER AVE
S Jackson St
Kellogg Ave
BELOIT AVE
S Read Rd
Lorene Rd
La Prairie Town Hall Rd
TRIPP RD
Tripp Rd
Balmoral Dr
Avalon Rd
Oakhill Ave
Beloit Ave
Innovation Dr
CTH J
AVALON RD
Van Allen Rd
Lowry Rd
Tracey Rd
Cemetery Rd
Maple Rd
CTH D
USH 51
CTH G
I-90/39 West
I-90/39 East
Happy Hollow Rd
Elm Dr
Belding Rd
Milton Shopiere Rd
Plymouth Church Rd


Janesville Area: Physically Inactive Adults in last 30 days
Source: PolicyMap and CDC BRFSS (2017); US Census Tract
Percent Inactive Adults
23%
24%
25%
City Limits Line
Water
0 0.5 1 2 3 4 Miles
N
USH 14
CTH A
STH 11
I 39/90
N WRIGHT RD
MILTON-SHOPIERE RD
E ROTAMER RD
MT ZION AVE
E MILWAUKEE ST
MINERAL POINT AVE
W COURT ST
ROCKPORT RD
W DELAVAN DR
AFTON RD
CENTER AVE
BELOIT AVE
TRIPP RD
AVALON RD
CTH MM
CTH J
CTH G
CTH D
STH 59


Janesville Area: ever diagnosed with high blood pressure
Source: PolicyMap and CDC BRFSS (2017); US Census Tract
Percent of Adults
24%-26%
26.1%-28%
28.1%-30%
30.1%-32%
City Limits Line
Water
0 0.5 1 2 3 4 Miles
N
USH 14
CTH A
STH 11
I 39/90
N WRIGHT RD
MILTON-SHOPIERE RD
E ROTAMER RD
MT ZION AVE
E MILWAUKEE ST
MINERAL POINT AVE
W COURT ST
ROCKPORT RD
W DELAVAN DR
AFTON RD
CENTER AVE
BELOIT AVE
TRIPP RD
AVALON RD
CTH MM
CTH J
CTH G
CTH D
STH 59

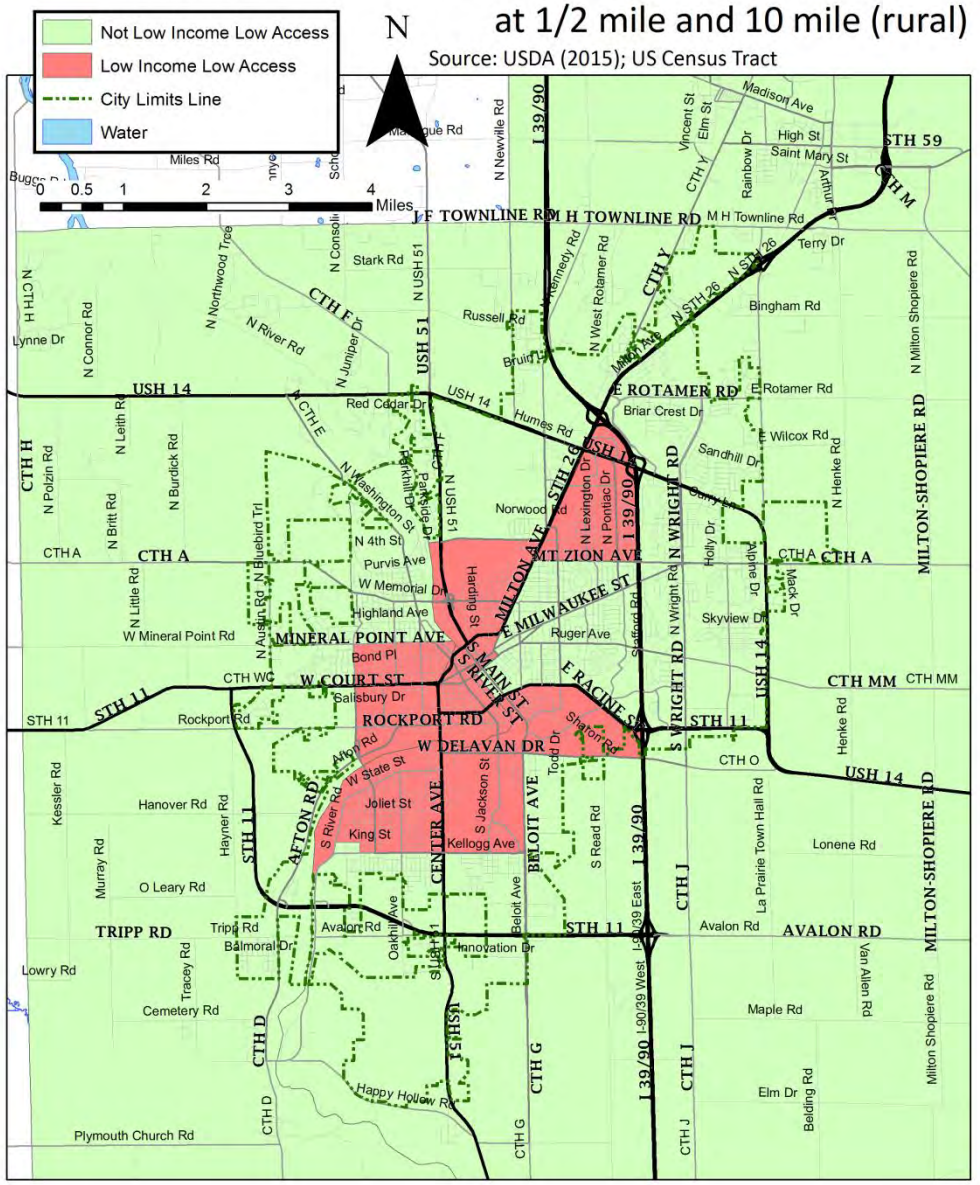
Janesville Area: Percentage of households below poverty line

Source: American Community Survey (2015-2019); US Census Tract



Janesville Area: Low Income and Low Food Access at 1/2 mile and 10 mile (rural)

Source: USDA (2015); US Census Tract



Equity and Transportation Disadvantage[39]

Promoting "a fair and just opportunity to be as healthy as possible"[40] for all residents of Janesville is an imperative of addressing health through planning. The previous section detailed disparities across Janesville's neighborhoods with relation to health outcomes. This section introduces the concept of transportation disadvantage, which occurs when a household experiences a mismatch between their mobility needs and their ability to fully utilize the transportation options available to them[41]. Several socio-economic conditions have been identified that may predispose people to transportation disadvantage such as being low-income, a minority, households with limited English proficiency, people too young, too old, or unable to drive, people with cognitive or physical mobility impairments, single-parent households, and households without cars[35].

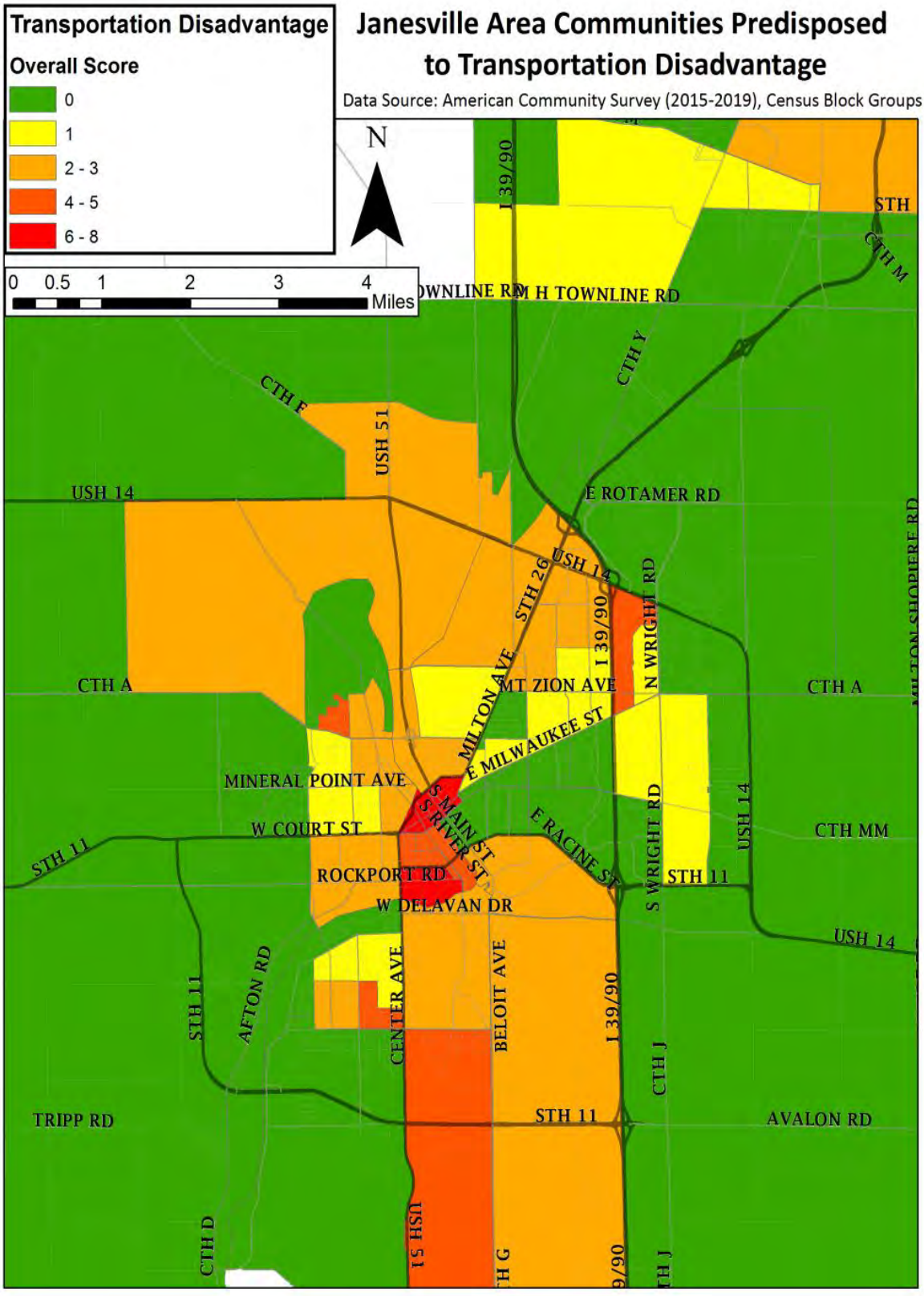
The vast majority of workers in Janesville commute to work by private automobiles while very few walk, bike and those who ride transit generally have limited alternatives. As identified in section 2, many places of daily importance, such as employment locations, grocery stores, schools, and healthcare facilities, have some level of accessibility to people who do not rely on a car but none of these areas are highly accessible. This creates situations where individuals who experience transportation disadvantage are dependent on others for access to employment, education, healthcare, shopping, and other daily errands, which can significantly impact their overall health and quality of life[42].

[39] The methodology used for this analysis involved compiling each SES at the block group level and comparing this value to the average in the Janesville MPA. The further above the mean, indicating a higher concentration of potential disadvantage, the higher the score the block group received. Block groups that had SES values between 1 and 2 standard deviations above the mean a block group received a score of 1 and received a score of 2 if the SES value was 2 or more standard deviations above the mean. The map below shows only the sum of overall scores, for access to the detailed information access a web map of the data here.

[40] University of Wisconsin - Population Health Institute. (2021). | What Is Health? County Health Rankings & Roadmaps. https://www.countyhealthrankings.org/what-is-health

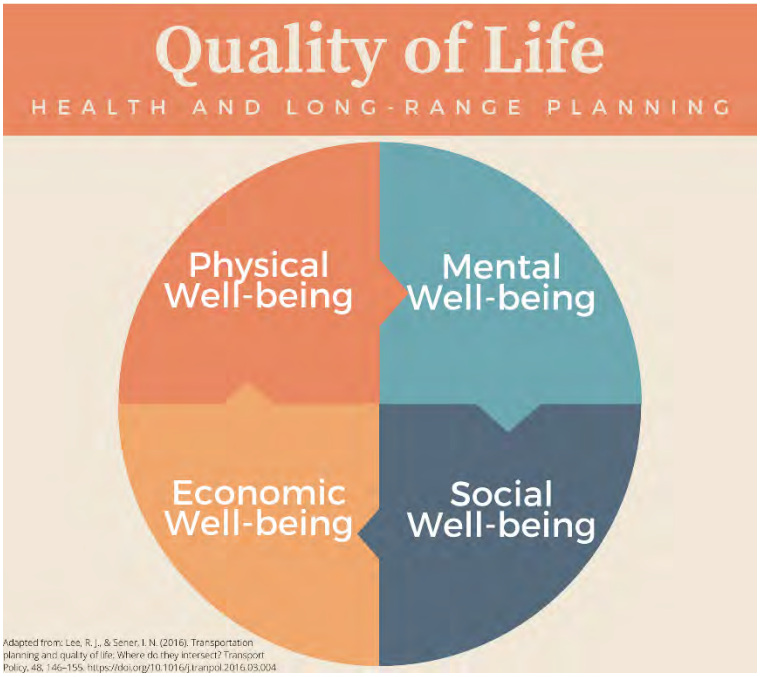
[41] Shay, E., Combs, T. S., Findley, D., Kolosna, C., Madeley, M., & Salvesen, D. (2016). Identifying transportation disadvantage: Mixed-methods analysis combining GIS mapping with qualitative data. Transport Policy, 48, 129–138. https://doi.org/10.1016/j.tranpol.2016.03.002

[42] Lee, R. J., & Sener, I. N. (2016). Transportation planning and quality of life: Where do they intersect? Transport Policy, 48, 146–155. https://doi.org/10.1016/j.tranpol.2016.03.004


Transportation Disadvantage
Overall Score
0
1
2 - 3
4 - 5
6 - 8
Janesville Area Communities Predisposed to Transportation Disadvantage
Data Source: American Community Survey (2015-2019), Census Block Groups
N
0 0.5 1 2 3 4 Miles
I 39/90
STH
CTH M
H TOWNLINE RD
CTH Y
CTH F
USH 51
USH 14
E ROTAMER RD
STH 26
N WRIGHT RD
MILTON AVE
MT ZION AVE
CTH A
E MILWAUKEE ST
MINERAL POINT AVE
S MAIN ST
S RIVER ST
W COURT ST
STH 11
E RACINE ST
S WRIGHT RD
CTH MM
ROCKPORT RD
W DELAVAN DR
AFTON RD
CENTER AVE
BELOIT AVE
CTH J
TRIPP RD
AVALON RD
CTH D

FRAMEWORK FOR HEALTH IN PLANNING

Public Health and Urban Planning share an origin, but have since diverged in their scope of practice. Planning is most engaged with ongoing development of the built environment and Health is most engaged in supporting community health outcomes through programming and services. What remains the same are the many ways in which the built environment creates barriers to accessing the places necessary for experiencing a high quality of life and the community achieving equity in health outcomes.



A framework centered on the community's quality of life is used to address community health outcomes through long-range planning, as the central pathway to improve health. The definition of quality of life includes both "a qualitative measure of well-being, 'how well one is doing', and the objective measure of life circumstances, 'how things are going'"[43] that is measured and defined by a community's physical well-being, mental well-being, social well-being, and economic well-being[44].

As such, a wide range of considerations are relevant to incorporating Health into the breadth of the Planning process and implementation. Some examples include:

Physical Well-being

- Adopt land division and zoning standards that accommodate and prioritize people, the outdoors and access by Active Transportation (walking / biking).
- Support compact, mixed-use development (smart growth).
- Promote infill development and redevelopment of greenfield sites.

Economic Well-being

- Provide density incentives for housing opportunities in and near major employment centers.
- Promote balanced distribution of retail and service sector developments in all areas of the City.
- Accommodate reasonably accessible urban and community gardening and appropriate scaled urban agriculture.

[43] Ferkany, M. (2012). The Objectivity of Wellbeing. Pacific Philosophical Quarterly, 93(4), 472–492. https://doi.org/10.1111/j.1468-0114.2012.01435.x

[44] Lee, R. J., & Sener, I. N. (2016). Transportation planning and quality of life: Where do they intersect? Transport Policy, 48, 146–155. https://doi.org/10.1016/j.tranpol.2016.03.004

Mental Well-being

- Promote accessible and connected culturally and environmentally diverse open spaces.
- Promote wellness education and active living for life practices.

Social Well-being

- Encourage third place developments that invite social and diverse interaction.
- Promote life-cycle housing.

KEY PLANNING ISSUES AND OPPORTUNITIES

The historical development of Janesville has significantly favored a built environment centered around automobiles, which contribute to increased risk factors for chronic disease and detract from an active public life outdoors on both residential and commercial streets. To complete daily activities, households in Janesville walk and bike less often while driving further and more often than does the rest of Wisconsin. This creates an opportunity to encourage more compact, walkable mixed residential and commercial developments along existing commercial corridors and in the downtown area. Identifying site design standards that de-center automobiles and promote walkability along with identifying catalytic projects within each commercial area will help to spur additional investment and redevelopment to accomplish these goals. Efforts to create and improve third places, or unofficial community gathering places, within Janesville could help to reduce social isolation and support social capital within the city.

The Downtown Janesville Revitalization, kick started by the 2014 ARISE Plan, has provided new public spaces in the downtown area, a new hotel, additional housing and continues to draw new investments into the commercial and retail environment. With this area being the most naturally compact, walkable, and bike-able, continued efforts to increase residential density and draw new investments downtown will help to center Janesville's most urban district as a keystone for the city's future.

The long-term commitment by the City of Janesville to invest in parks, greenspace, and recreational trails has allowed most residential areas of the city to become connected to restorative outdoor spaces and recreational opportunities via low-stress pathways. The same connectivity does not exist between neighborhoods and most of Janesville's commercial and employment areas. Continued investment in parks and trails should address connectivity islands across land uses, continue to support active living, and could activate underutilized public park land with natural landscaping, community gardening and participatory design projects.

With recent population trends indicating that the City of Janesville as a whole is becoming more racially and ethnically diverse[45], and the Downtown area remains a racially and ethnically diverse place, efforts to create and financially support culturally-relevant community groups, social events, public

45 Steven Manson, Jonathan Schroeder, David Van Riper, Tracy Kugler, and Steven Ruggles. IPUMS National Historical Geographic Information System: Version 16.0 [dataset]. Minneapolis, MN: IPUMS. 2021. http://doi.org/10.18128/D050.V16.0

spaces, and amenities in the community will help to create an enhanced sense of place for residents as well as new cultural experiences for visitors.

As Janesville's population continues to age, the connectivity issues between traditional neighborhoods and other areas of the city will become a significant mobility barrier. Adopting universal design standards for streets and pedestrian elements, new housing developments, and commercial places will help to address this problem. Additionally, developing a city-wide aging in place policy that seeks to improve the spatial match of senior housing, commercial areas, and health care would also help to address this issue. Ensuring that new multi-family housing is located on existing Janesville Transit Routes will also reduce accessibility barriers for disadvantaged residents.

Due to limited full-service grocery stores operating outside of the Milton Ave (Hwy 26) and Humes Rd (Hwy 14) commercial corridor, much of the central part of Janesville has low access to healthy foods within both ½ mile and 1 mile from their homes. Efforts to bring a full-service grocery store to the central city would yield benefits for the most disadvantaged residents, as well as draw more residents into the downtown area. Investing in the long-term sustainability of community gardens and/or urban farming throughout the city would help to bolster social well-being as well as increasing food security for residents. Looking into a year-round marketplace in Downtown Janesville could help to increase the availability of healthy food options while helping to incubate local food entrepreneurs.

The Janesville Metropolitan Planning Organization has completed a Long-Range Transportation Plan that seeks to create a multi-modal transportation system that serves all residents equitably and helps to reduce Janesville's dependence on automobiles. With plans for expanded bicycle lanes on existing streets and new off-street trails, pedestrian safety improvements going into new street redesigns, road diets planned for overdeveloped roadways, and ongoing support for a high-level of service and reliability for the Janesville Transit System, Janesville has an opportunity for a more active future. Efforts to close the existing connectivity gaps across the three forms of active transport, encouraging residents to use alternative forms of transportation, as well as supporting efforts to increase ridership on JTS are needed to ensure the vision laid out in the LRTP comes to fruition. Formalizing a complete streets policy will ensure that existing efforts of street redesigns will occur into the future and signal to the community a commitment towards creating a more vibrant, healthy, and equitable future for Janesville residents.