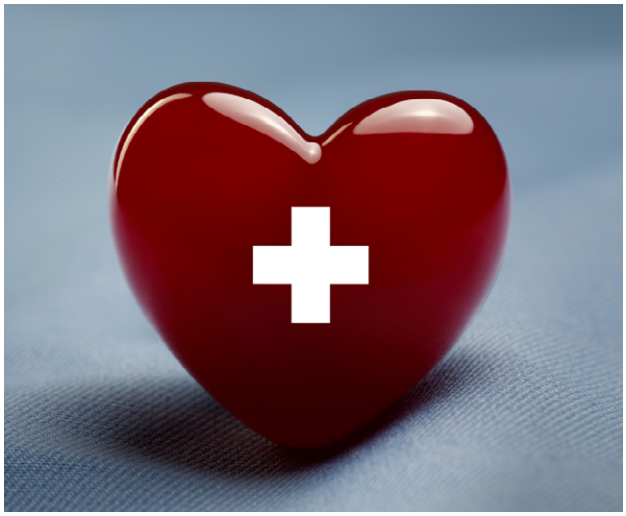

Health + Transportation Study for the Rockford Region

MPO | REGION 1 PLANNING COUNCIL

Final Report
December 2024

Health + Transportation Study

for the Rockford Region

Final Report 12.19.2024

This document has been prepared by Region 1 Planning Council in collaboration with its member agencies, partnership organizations, and local stakeholders.

This report was prepared in cooperation with the following:

U.S. Department of Transportation
Federal Highway Administration
Federal Transit Administration
Illinois Department of Transportation

The contents, views, policies, and conclusions expressed in this report are not necessarily those of the above agencies.

AN ENGINE FOR COLLABORATION IN NORTHERN ILLINOIS

Region 1 Planning Council
127 N. Wyman St., Ste. 100
Rockford, IL, 61101
(815) 319-4180 | info@r1planning.org | r1planning.org

For complaints, questions, or concerns about civil rights or nondiscrimination; or for special requests under the Americans with Disabilities Act, please contact: Sydney Turner, Director of Regional Planning/MPO Title VI Coordinator at (815) 319-4180 or sturner@r1planning.org

Acknowledgments

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Boone County

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PART 1:

Introduction

Transportation decisions can significantly impact community health outcomes. Effective transportation decisions can help people get to work and school, access healthy foods, and stay physically active. However, poor transportation decisions can often harm the health of the community, individuals, and families, particularly those living in disadvantaged communities. To ensure future transportation planning efforts and decisions are made with consideration for public health, Region 1 Planning Council (R1), serving as designated Rockford Metropolitan Planning Organization (MPO), conducted a Health and Transportation Study for the Rockford Region. The purpose of this study is to highlight current connections between transportation and health, document a baseline for health-related indicators, and serve as a reference guide for both health and transportation decision-makers.

The Link between Health and Transportation

The transportation system has a role in shaping the public realm, including streets, buildings, parks, and other shared spaces. All of which has a significant influence on public health and ease of access to medical care. Given the multifaceted influence of transportation on people's lives, reliable and accessible transportation services are a fundamental part of a community's health. Transportation challenges can impact a person's ability to access healthcare services, leading to poor health outcomes for individuals and the community as a whole. By incorporating health outcomes and healthcare access into the transportation process, the region can ensure transportation is not a significant barrier to health.

Social Determinants of Health

Social determinants of health (SDOH) are the conditions in which people are born, grow, work, live and age that effects of their daily life. These conditions affect a wide range of health, functioning, and quality of life outcomes and risks.[i] Social determinants of health are grouped into the following five domains:

- Economic stability,
- Education access and quality,
- Healthcare access and quality,
- Neighborhood and built environment, and
- Social and community context.

These social determinants can be as important as health care in determining an individual's health outcomes and can drastically influence health inequities. The SDOH should be considered in decisions that impact community health, including transportation planning and investment decisions.

Transportation & Health Equity

Equity in transportation seeks fairness in mobility and accessibility to meet the needs of all community members. According to the Federal Highway Administration, "A central goal of transportation is to facilitate social and economic opportunities by providing equitable levels of access to affordable and reliable transportation options based on the needs of the populations being served, particularly populations that are traditionally underserved." However, transportation policies and investment decisions have historically disproportionally impacted underserved communities negatively, such as increased health risks and the segregation of communities.[ii] As a fundamental component of the built environment, transportation significantly influences public health and contributes to health equity across the entire region.

Underserved Populations

Underserved populations are groups of people who have limited access to resources and are otherwise disenfranchised, including people who experience discrimination or barriers to accessing public services, such as health care and transportation. These populations include persons of color; members of religious minorities; lesbian, gay, bisexual, transgender, and queer (LGBTQ+) persons; persons with disabilities; persons who live in rural areas; and persons otherwise adversely affected by persistent poverty or inequality.

Study Process

This study was developed through a multi-phased process, which allowed a holistic assessment of the relationship between health and transportation in the Rockford Region to take place. Each phase of the development process is described below.

Phase 1. Community Values & Principles. The initial phase of this project was the identification of the community's overarching values and principles for transportation decisions as they relate to health. Instead of developing goals related to this subject-matter, values and principles were identified. Values and principles provide greater flexibility and can be adapted as the needs and priorities of the community shift. This stands in contrast to goals, which are pursued and marked as achieved once accomplished.

In order to identify the regional values and principles, R1's Community Advisory Forum (CAF) was consulted. Engagement in this phase of the project was crucial as it influenced the direction of the study and the range of recommendations proposed later in the process. Some of the advisory committee members involved included local and state health departments, public healthcare systems, community health boards, local elected officials, and more.

Phase 2. Problem Statements & Opportunities. The purpose of Phase 2 was to develop a common understanding of the health deficiencies and opportunities related to transportation that exist within the Rockford Region. Many of the deficiencies and opportunities extend beyond the physical transportation network and, for this reason, it was important to also integrate other planning areas into the project such as land use, economic development, housing, and the natural environment.

This phase of the project provided a second opportunity to engage the advisory committee. Questions the advisory committee explored and collaborated on included:

- How is transportation affecting health in the region?
- How can transportation increase access to health care?
- How can this study lead to improvements in health outcomes?
- Have any existing or potential transportation-related health risks or issues already been identified in the region, including assessments on the prevalence of obesity, asthma, vehicular crashes, pollution-related illness, or other health issues that might be influenced by transportation recommendations?

Phase 2 also included researching opportunities to improve health with transportation investments and funding. Additionally, research efforts identified public health partner's willingness or ability to provide additional resources, such as in-kind services, grants, or funding.

Phase 3. Data Collection & Analysis. One of the core objectives of this study was to develop a baseline of reliable indicators related to both health and transportation in order to measure the effectiveness of recommendations endorsed in the final study. To achieve this objective, an extensive data collection and analysis process was conducted.

First, a variety of data was collected from national and state sources that are readily available and reliable, such as the U.S Census, H+T index, Center for Disease Control, U.S. Department of Health and Human Services (HHS), U.S. Department Housing and Urban Development, Illinois Department of Transportation (IDOT), and Illinois Department of Public Health (IDPH). Additional data was also collected from local agencies at more granular levels than what was available at the national or state levels. As a part of this phase, staff also conducted several assessments and analyses, including proximity and access analyses. For example, staff conducted analysis on the number of housing units within half a mile of a Medicaid provider or free clinic.

Second, the indicators used to measure the effectiveness of the range of recommendations were identified. Possible indicators are "reduce the number of days in which people are exposed to unhealthy air" and "increase the number of miles considered bicycle-friendly."

These indicators had to meet the following criteria:

- Measurable over time,
- Focus on risk factors, behaviors, and access rather than disease outcomes,
- Address the needs and priorities identified in Phase 1 of study, and
- Address SDOH, health disparities, and health equity.

Phase 4. Range of Recommendations. After extensive data collection and analysis, a range of recommendations for the identified problems and opportunities in the second phase was developed. The range of recommendations is supported through the data analysis completed in Phase 3 of the study, as well as through best practices and case study research. The recommendations were also compared to the goals of the MPO's Metropolitan Transportation Plan (MTP), IDOT's Long Range Transportation Plan (LRTP), and strategic plans of local health departments for consistency and compatibility. Once a range of recommendations was drafted, it was presented to the advisory committee. The advisory committee then selected a preferred recommendation set from the full range of recommendations.

Phase 5. Project Wrap-Up. The final phase of the project focused on developing the final deliverable, a Health and Transportation Study for the Rockford Region. Staff consolidated all work efforts into a final document which underwent a thorough review process before being published.

Study Area

The study area for this planning effort is the Metropolitan Planning Area (MPA). The MPA boundary is based upon the Urbanized Area (UZA), as determined by the U.S. Census Bureau, the adjusted Urbanized Area, as determined by the Metropolitan Planning Organization (MPO) and its partner agencies, plus any other contiguous area anticipated to be urbanized in the next twenty years.

The MPA boundary is developed in partnership with local jurisdictions, local stakeholders, the state, and the MPO Policy Committee. The last updates to the MPA boundary occurred in 2024, after the 2020 Decennial Census.

Figure 1-1 depicts the MPA boundary, along with the U.S. Census defined Urbanized Area.

Urbanized Areas

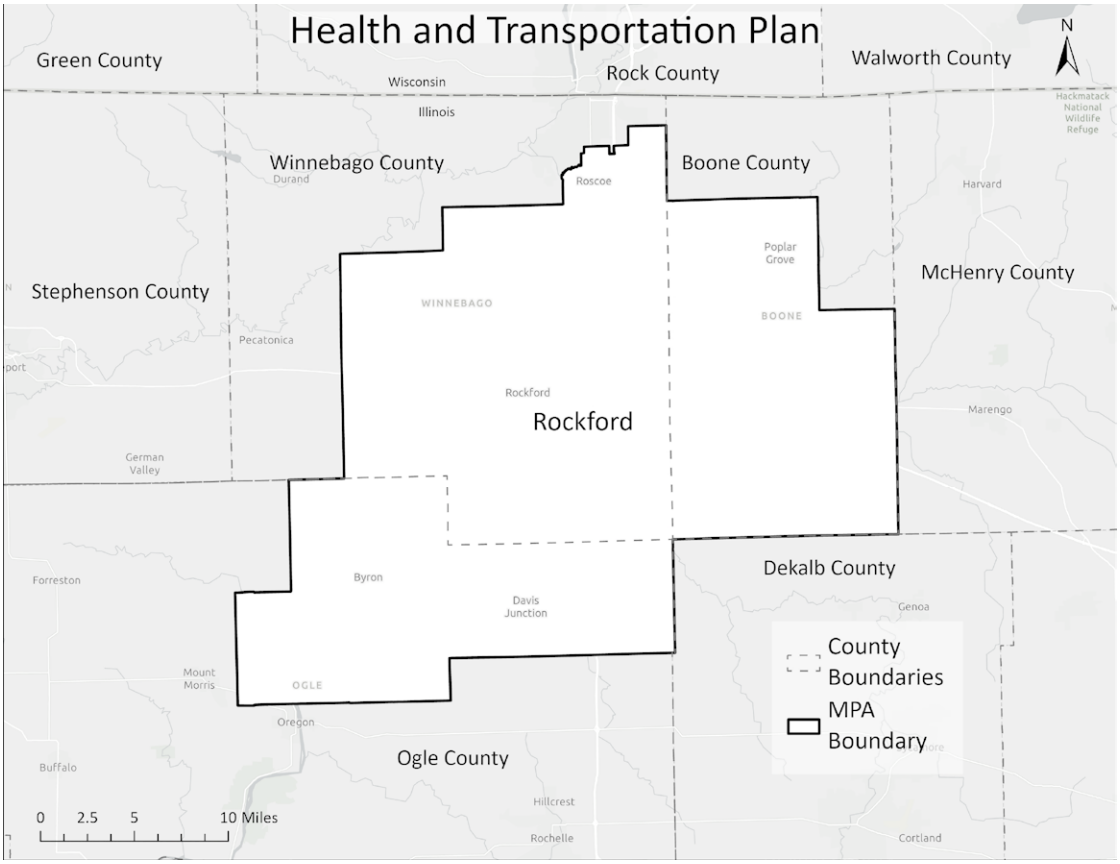
Urbanized areas are determined by the U.S. Census Bureau every 10 years in conjunction with the decennial census and defines an area with a population of 50,000 or more that is considered currently urban in character.

Source: U.S. Census Bureau

As shown in Figure 1-1, the Rockford MPA is smaller than the boundaries of Boone, Ogle, and Winnebago Counties and covers approximately 682 square miles. However, to a limited extent, the MPO coordinates transportation planning and improvement activities throughout those counties. This occurs voluntarily via communication and cooperation of Boone, Ogle, and Winnebago County officials serving on the MPO Policy and Technical Committees.

For the purposes of this study, the Rockford Region and Rockford MPA are used interchangeably. However, data presented throughout the study is provided at the national, state, and county level, as well as at the Rockford Metropolitan Statistical Area (MSA), which encompasses all of Boone and Winnebago Counties.

Figure 1-1: Rockford Metropolitan Planning Area



Source: Region 1 Planning Council

Stakeholder Engagement

Stakeholder and public engagement is an important aspect of the transportation planning process. Numerous rounds of stakeholder engagement took place to support this study's development. It was especially important to connect with both the recipients and providers of healthcare in the Rockford Region. Over the course of 12 months, three surveys were conducted that feed into the Health and Transportation Study.

Healthy Community Study. In March 2023, the Rockford Regional Health Council (RRHC) commissioned R1 to administer and analyzes the 2023 Healthy Community Studies. A total of 1,260 residents of Boone and Winnebago Counties were surveyed about their health.

Health Provider Survey. In September 2023, Region 1 Planning Council, in partnership with the RRHC, surveyed a number of health departments, health and healthcare foundations, health-related nonprofits, private and public healthcare providers, advocacy groups, and providers. The purpose of this survey was to gather provider knowledge regarding how their patients get to and from services. Additionally, respondents provided information about transportation services they provide to their clients and whether the COVID-19 pandemic disrupted these services.

Health and Transportation Public Survey. From December 2023 through February of 2024, a health and transportation public survey was released to better understand how individuals access medical care and transportation barriers they face doing so. The survey was placed within the waiting rooms of various medical facilities throughout the region. Additionally, a number of pop-ups were held at local healthcare provider offices to speak directly with patients about their transportation challenges.

Responses to the surveys helped paint a picture of the state of healthcare in the region, in particular its relationship to transportation. Public engagement efforts are provided in more detail as a part of Appendix B.

Organization of Report

The Health and Transportation Study is organized as follows:

Part 1: Introduction. This first chapter of the study sets the stage by detailing the purpose and intent of the Health and Transportation Study, as well as goes on to outline the study process, engagement efforts, and organization of the report.

Part 2: Regional Context. This chapter details key community factors and characteristics of the Rockford Region. The first section provides demographic and socioeconomic trends for the region, as well as key health-related statistics. The second section discusses health and transportation services, as well as how many organizations within the region provide transportation services to and from medical appointments.

Part 3: Social Determinants of Health. The goal of this section of the study is to provide readers with a better understanding of the SDOH and the five domains. Social determinants of health are external factors that impact individuals in the environments where they are born, live, work, grow and age in. Conditions such as poverty, social inclusion, and employment can influence the health outcomes of individuals and communities.

Part 4: Transportation & the Build Environment. This chapter addresses transportation considerations and their impact on regional health, including an overview of community design, active transportation, public transportation, shared mobility, safety, and pollution.

Part 5: Guiding Principles & Recommendations. The fifth chapter presents the guiding principles and introduces a range of transportation-related recommendations the region can implement to enhance public health and improve access to healthcare.

Part 6: Looking Forward. The study concludes with an overview of the steps needed to be taken in planning, programming, and policy considerations to improve health outcomes related to transportation before restating the purpose and context of the study.

PART 2:

Regional Context

Key to understanding the relationship between the transportation system and health outcomes is an understanding the regional context. The functionality of a transportation system is largely dependent upon factors beyond the transportation network itself, such as population, housing, employment, land use, development patterns, and the environment. Conversely, the transportation network can directly impact these factors.

This chapter contains three sections that detail the analysis of key factors in understanding the characteristics of the Rockford Region. The first section provides demographic and socioeconomic trends and forecasts for the region. The second section focuses specifically various aspects pf the public health, including mental health, health insurance, and public assistance programs.

Demographic and Socioeconomic Characteristics

Data from the U.S. Census Bureau was used to compile the information in this section, unless otherwise noted. A full population count and basic survey is completed every ten years, most recently performed in 2020. The Census Bureau also conducts an ongoing survey, called the American Community Survey (ACS), which administers a more detailed assessment of a small sample of the population. For the following analysis on demographic and socioeconomic data, the 2021 ACS Estimates were utilized.

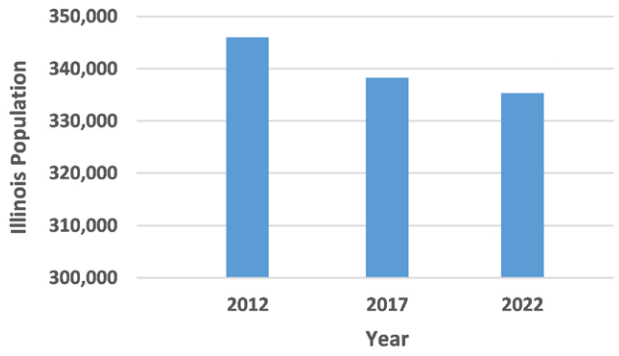
Population

The characteristics of the Rockford Region's population must be established before the relationship between the region's transportation system and healthcare are examined. Demographic indicators, including age, sex, and race, are provided below, and give important context to this study.

The Rockford Region has seen varying levels of population growth and decline over the last 90 years. From 1930 to 1970, Winnebago County's population steadily grew before experiencing two decades of slight decline during the economic recession of the 1980s. Following the recession, Winnebago County returned to a moderate growth rate which was slightly greater than the average growth rate for the state of Illinois. During the same time, Boone County experienced a rapid population increase between 1970 and 2010. Both counties have seen their populations decline following the recession of 2008.

The Rockford Region has seen a decrease in population over the past decade. The population of Rockford MSA in 2021 was estimated to be 339,063. Of that, an estimated 285,471 residents reside in Winnebago County and the remaining 53,592 reside in Boone County.

Figure 2-1: Regional Population



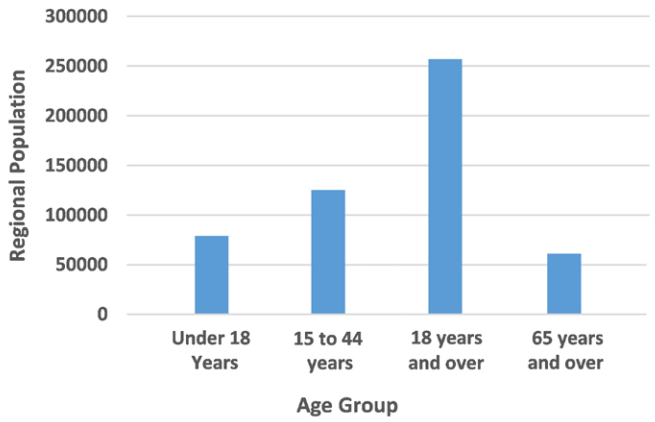
Source: U.S. Census Bureau

Age

The median age of residents in the Rockford MSA is currently 39.8 years old, which is slightly higher than the state median age of 28.7 years. Children under the age of 18 comprise 26.1 percent of the population, while those over the age of 65 comprise 17.8 percent of the population. The remaining 56.3 percent fall between the working ages of 18 to 65 years old.

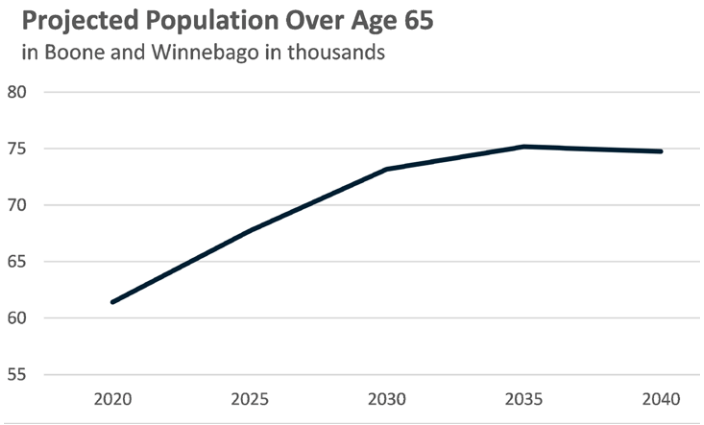
The population in the Rockford MSA is aging, which is an observable trend across the county. As previously noted, persons 65 years and over represent 17.8 percent of the Rockford MSA's population which is higher than the percentage of Illinois residents in that same range (15.7 percent). In 2010, the 65 and older bracket represented only 13 percent of the area's population underscoring increased aging trends in the region.

Figure 2-2: Current Regional Age Demographics



Source: U.S. Census Bureau

Figure 2-3: Aging Population



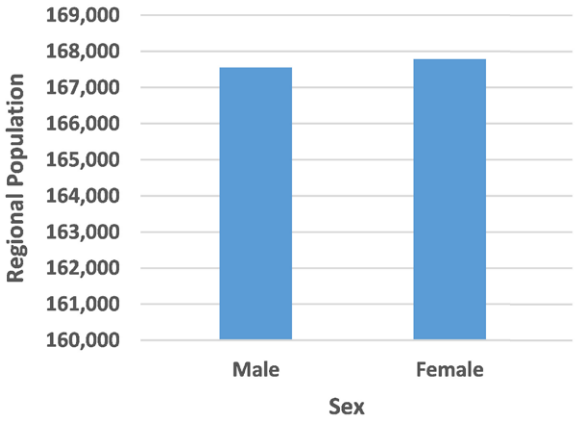
Source: Woods & Poole

The region's aging population makes the connection between health and transportation particularly relevant. Older residents of the region will have different transportation needs than their younger counterparts. They require access to healthcare facilities and other essential locations; this access may be made possible through modes of transport outside of a personal motor vehicle.

Sex

Females make up the majority of the region's population at 50.9 percent while males account for 49.1 of the population. Figure 2-4 shows the population of males and females in the Rockford Region in 2022.

Figure 2-4: Rockford MPA Population by Sex

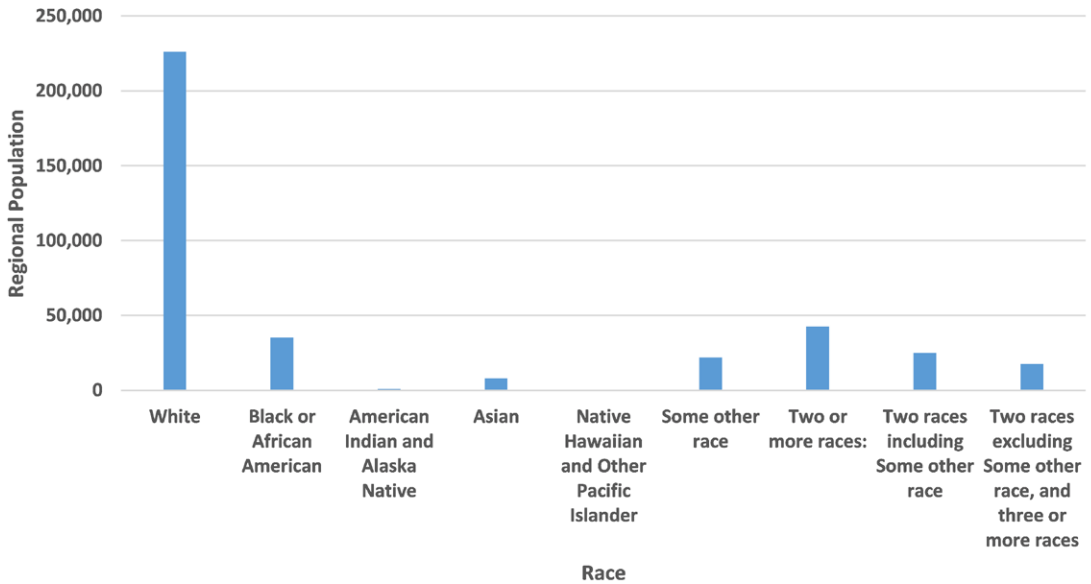


Source: U.S. Census Bureau

Race

The majority of residents in the region are White, representing 76 percent of the population in the Rockford MSA. The second largest racial group in the region is Black or African American, totaling 11.6 percent of the population. Within the Rockford MSA, 5.8 percent of residents identified as "Two or More Races" and 3.7 percent identified as "Some other Race".

Figure 2-5: Rockford MPA Population by Race



Source: U.S. Census Bureau

The largest and fastest growing population group in both Boone and Winnebago County is Hispanic or Latino. In the Rockford MSA, 15 percent of the population identifies as Hispanic or Latino. This share represents over 50,000 people. Boone County's Hispanic or Latino population makes up 22.8 percent of the County's population. Boone County's Hispanic or Latino community exceeds both the state average of 17.5 percent and the national average of 18.4 percent.

Households

In 2021, a total of 134,137 households lived in Boone and Winnebago Counties. Of these households, approximately 65 percent of these households are considered families, meaning that one or more people living in the same household are related to the householder by birth, marriage, or adoption. A majority of these households are married-couple families (70.2 percent), followed by female householders with no spouse present (21.2 percent). Approximately 41.3 percent of all families have children under the age of 18 years.

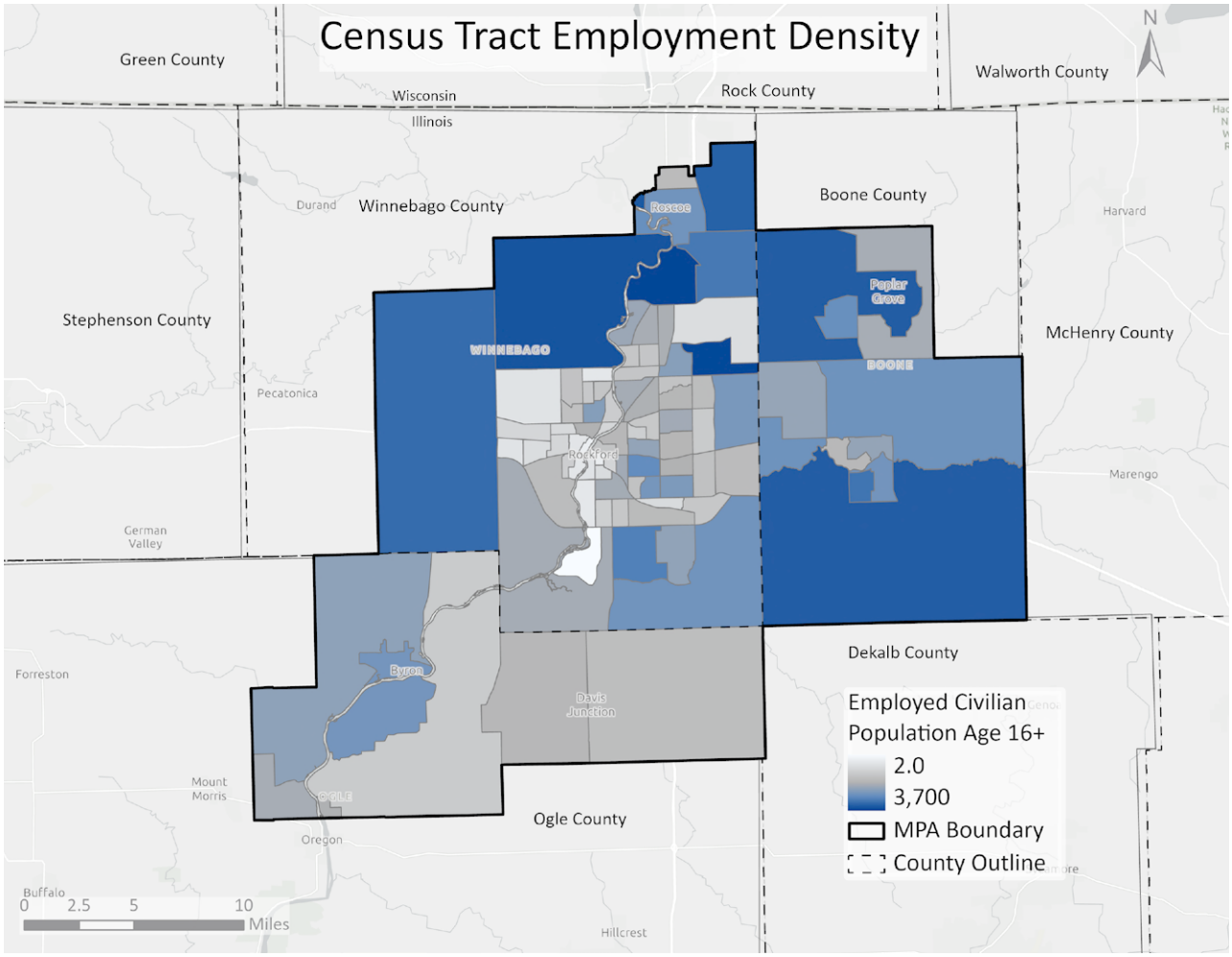
Economic

The economic conditions of a community are strongly related to health outcomes, as well as transportation. An understanding of the economic context of the Rockford Region is necessary to fully evaluate health outcomes and their relationship to transportation. Multiple economic indicators are presented below in order to provide this understanding. More information on the relationship between health and economy is provided in Part 4. Social Determinants of Health.

Job Density

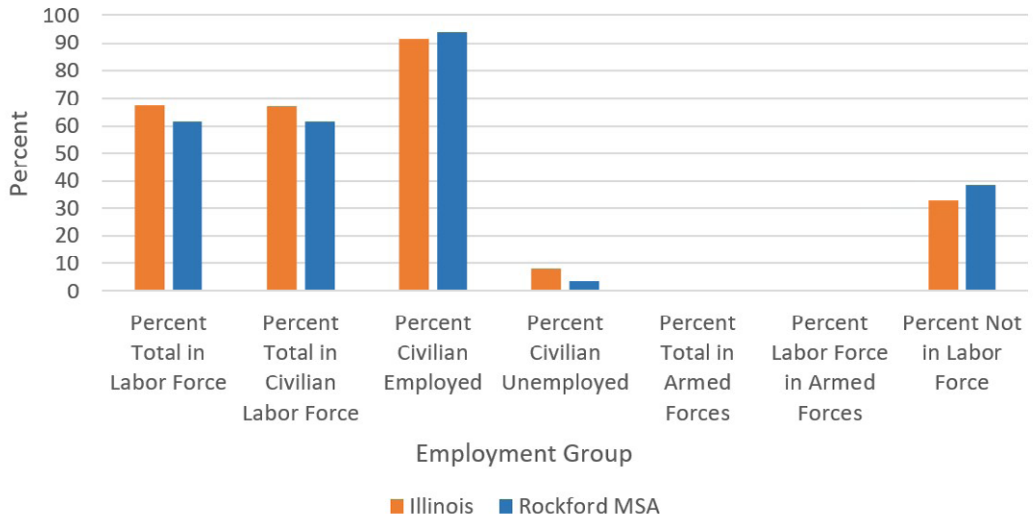
Employment density refers to the concentration of jobs within census tracts and is a strong indicator of the overall economic vitality. As shown in Figure 2-6, the Census tracts with the highest employment density is largely concentrated in the Cities of Belvidere and Rockford. In City of Belvidere, employment is largely concentrated around the I-90 industrial corridor, while the Census tracts with the highest employment density in the City of Rockford are spread throughout the city.

Figure 2-6: Census Tract Employment Density



Source: Region 1 Planning Council

Figure 2-7: Employment Rate



Source: American Community Survey

Employment Status

An estimated 63.7 percent of the population 16 years and older in the Rockford MSA are a part of the labor force, while 7.9 percent of the population was unemployed. The Rockford MSA's unemployment rates are higher than both the state and nation's rates of 6.2 percent and 5.5 percent, respectively. In Winnebago County, 7.9 percent of the labor force is unemployed, while Boone County has an unemployment rate of 8.2 percent. Additionally, Winnebago County has a higher percentage (36.9 percent) of the population not in the labor force compared to Illinois (34.7 percent). Individuals not in the labor force include students, retired persons, and those not seeking work.

Income

Household income is a commonly used indicator for the overall economic health of a region. This metric also provides insight into a household's ability to handle medical expenses. The median household income within the Rockford MSA is $59,559, which is below the median ($72,563) household incomes for the State of Illinois. However, Boone County's median household was $74,076, which is slightly above the State median incomes. While Winnebago County's median household income fell below the State's figure, at $57,779.

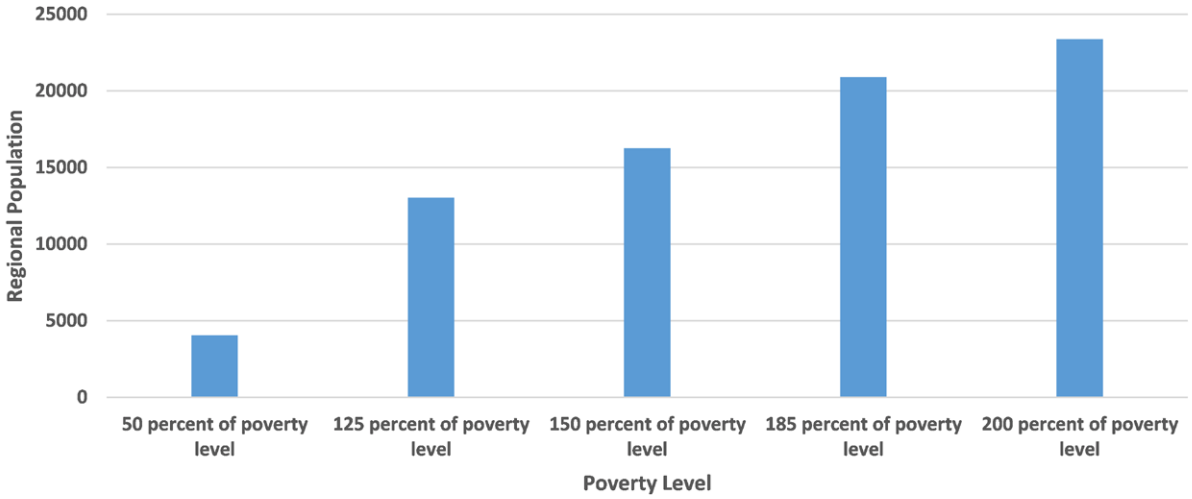
In the Rockford MSA, 4,059 households have incomes at or below 50 percent of the poverty level, categorizing them as experiencing deep poverty. An estimated 23,375 low-income households are living at 200 percent or below the poverty level; these households make up 26.8 percent of family households in the region.

Table 2-1: Household Income

Income range	United States Households	Illinois Households	Rockford MSA Households
Less than $10,000	5.5%	5.9%	5.5%
$10,000 to $14,999	3.9%	3.5%	3.7%
$15,000 to $24,999	7.8%	7.4%	6.8%
$25,000 to $34,999	8.2%	7.7%	7.3%
$35,000 to $49,999	11.4%	10.7%	10.7%
$50,000 to $74,999	16.8%	16.3%	16.2%
$75,000 to $99,999	12.8%	12.9%	12.8%
$100,000 to $149,999	16.3%	17.1%	16.9%
$150,000 to $199,999	7.8%	8.5%	8.7%
$200,000 or more	9.5%	10.1%	11.5%
Median income (dollars)	$69,021	$72,563	$74,755
Mean income (dollars)	$97,196	$100,719	$105,555

Source: American Community Survey

Figure 2-8: Percent of Households below Poverty Level in the Rockford MSA



Source: American Community Survey

Education

In the Rockford MSA, while the majority of adults over the age of 25 have at least a high school diploma or equivalent (88 percent), the MSA has a higher percentage of adults over 25 who attended but did not graduate from high school (11.9 percent) than the nation and state. For 31.5 percent of adults over the age of 25 on the Rockford MSA, a high school diploma is their highest level of educational attainment.

The region has several higher education institutions within commuting distance. The City of Rockford hosts Rockford University, a private four-year college, as well as the University of Illinois' College of Medicine at Rockford. Rock Valley Community College and several other technical colleges can also be found in the region. Several four-year colleges and universities are within commuting distance of the region, including Beloit College, Northern Illinois University, and University of Wisconsin-Whitewater.

Table 2-2: Educational Attainment

Rockford, IL Metro Area	Total Estimate	Percent	Margin of Error	Total Estimate (Male)	Percent of Males	Total Estimate (Females)	Percent of Females
Population 25 years and over	227,346	(x)	109,707	±858	(x)	117,639	(x)
Less than 9th gradew	7,053	3.1%	3,448	±951	3.1%	3,605	3.1%
9th to 12th grade, no diploma	18,049	7.9%	9,469	±1,442	8.6%	8,580	7.3%
High school graduate (includes equivalency)	70,468	31.0%	35,666	±2,651	32.5%	34,802	29.6%
Some college, no degree	51,441	22.6%	25,122	±2,100	22.9%	26,319	22.4%
Associate's degree	21,116	9.3%	8,711	±1,602	7.9%	12,405	10.5%
Bachelor's degree	36,129	15.9%	19,105	±1,897	14.7%	20,024	17.0%
Graduate or professional degree	23,090	10.2%	11,186	±1,633	10.2%	11,904	10.1%
High school graduate or higher	202,244	89.0%	96,790	±1,835	88.2%	105,454	89.6%
Bachelor's degrees or higher	59,219	26.0%	27,291	±2,122	24.9%	31,928	27.1%

Source: American Community Survey

Table 2-3: College within Commuting Distance

Four Year Institutions

Institution	Location	Distance	Enrollment*
Beloit College	Beloit, Wisconsin	16 Miles	1,011
Blackhawk Technical College	Janesville, Wisconsin	23 Miles	8,741
Judson University	Elgin, Illinois	44 Miles	934
Northern Illinois University	DeKalb, Illinois	28 Miles	16,234
Rockford University	Rockford, Illinois	Within MPA	1,250
St. Anthony College of Nursing	Rockford, Illinois	Within MPA	189
Upper Iowa University	Rockford, Illinois	Within MPA	142
University of Wisconsin- Whitewater	Whitewater, Wisconsin	43 Miles	10,494

Community Colleges

Institution	Location	Distance	Enrollment*
Highland Community College	Freeport, Illinois	30 Miles	2,700
Kishwaukee College	Malta, Illinois	26 Miles	2,626
Rock Valley College	Rockford, Illinois	Within MPA	2,494

Other Institutions

Institution	Location	Distance	Enrollment*
Rockford Career College	Rockford, Illinois	Within MPA	408
Rasmussen College	Rockford, Illinois	Within MPA	1,729
University of Illinois- Rockford Health Sciences Campus	Rockford, Illinois	Within MPA	230

*2022-2023 enrollment numbers from each college's website

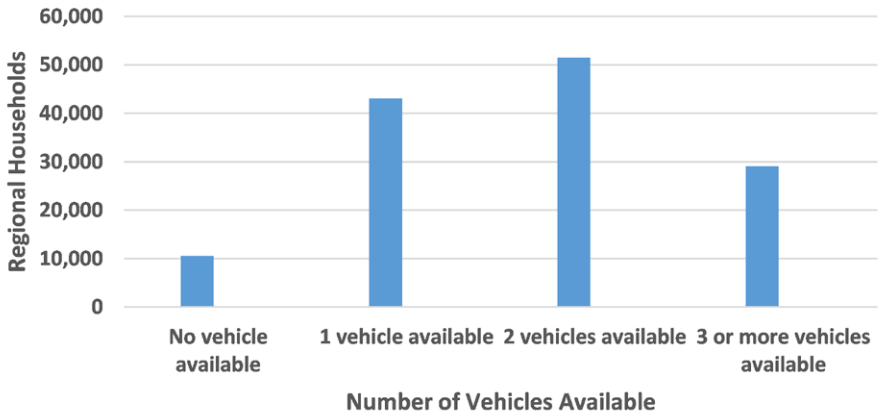
Source: Woods & Poole

Transportation

The primary means of transportation to work in the Rockford MSA is by a personal vehicle, such as a car, truck or van, either alone or carpooling, at 90.8 percent. Comparatively, public transportation and biking or walking to work occurs at much lower rates, respectively 0.8 percent and 1.4 percent. As of 2021, almost 6 percent of workers in the Rockford MSA worked from home. The mean travel time to work, regardless of mode, for Winnebago workers is 23.1 minutes, while for Boone County workers it is 27.6 minutes.

Approximately 2.3 percent of workers 16 years or older in the Rockford MSA do not have access to a vehicle. While 36.4 percent of workers 16 years or older have access to three or more vehicles. Figure 2-9 shows the distribution of household vehicle availability of workers.

Figure 2-9: Household Vehicle Available



Source: American Community Survey

Public Health Overview

Public health is the science of improving and protecting the health of communities and people through education, promotion of healthy lifestyles, research toward prevention of disease and injury, and detecting, preventing, and responding to infectious diseases.[vii] Public health covers an extensive number of activities and subject-matters. For the purposes of this section, general statistics are provided on public health in the Rockford Region.

Table 2-4: Major Hospitals in the Rockford Region

Hospital Name	Municipality
UW Health Swedish American Hospital	City of Rockford
OSF Saint Anthony Medical Center	City of Rockford
Javon Bea Hospital- Riverside	City of Rockford
Javon Bea Hospital- Rockton	City of Rockford
UW Health Belvidere Hospital	City of Belvidere

Source: American Community Survey

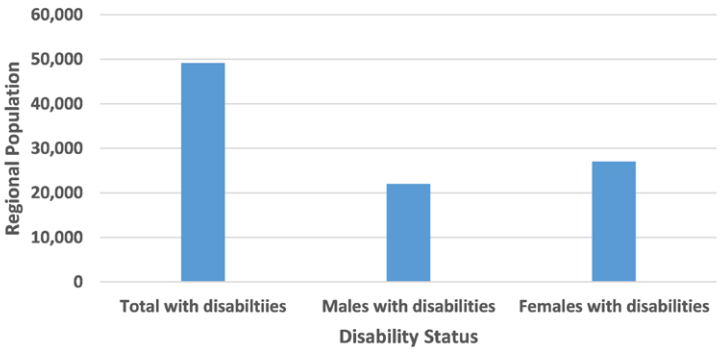
Healthcare Providers

Healthcare plays a large role in the daily lives of the region's residents. The region is home to five major hospitals, four of which are located in the City of Rockford. The region is also home to 23 urgent care facilities, providing prompt and immediate care to patients. Healthcare is the region's second largest employment sector. As of 2022, approximately 76,240 individuals were employed by healthcare and social assistance providers in the region.

Disabilities Status

The percent of individuals with disabilities in higher in the Rockford MSA (13.8 percent) than in the rest of the U.S. (12.6 percent)and Illinois (11.3 percent). Women are more likely than men to identify as disabled within the Rockford MSA, at 14.1 percent and 13.4 percent respectively.

Figure 2-10: Individuals with Disabilities



Source: American Community Survey

Serious Mental Health

Serious Mental Illness (SMI)[iii] is defined as someone over the age of 18 who has (or had within the past year) a diagnosable mental, behavioral, or emotional disorder that causes serious functional impairment that substantially interferes with or limits one or more major life activities.[iv] In the United States, five percent of the adult population suffers from an SMI, while 19 percent of Illinois' adult population suffers from some form of mental illness. Individuals with SMI are more likely to experience homelessness, incarceration, or substance abuse.[v] There is little to no data showing the prevalence of SMIs in Winnebago and Boone Counties relative to the rest of the country.

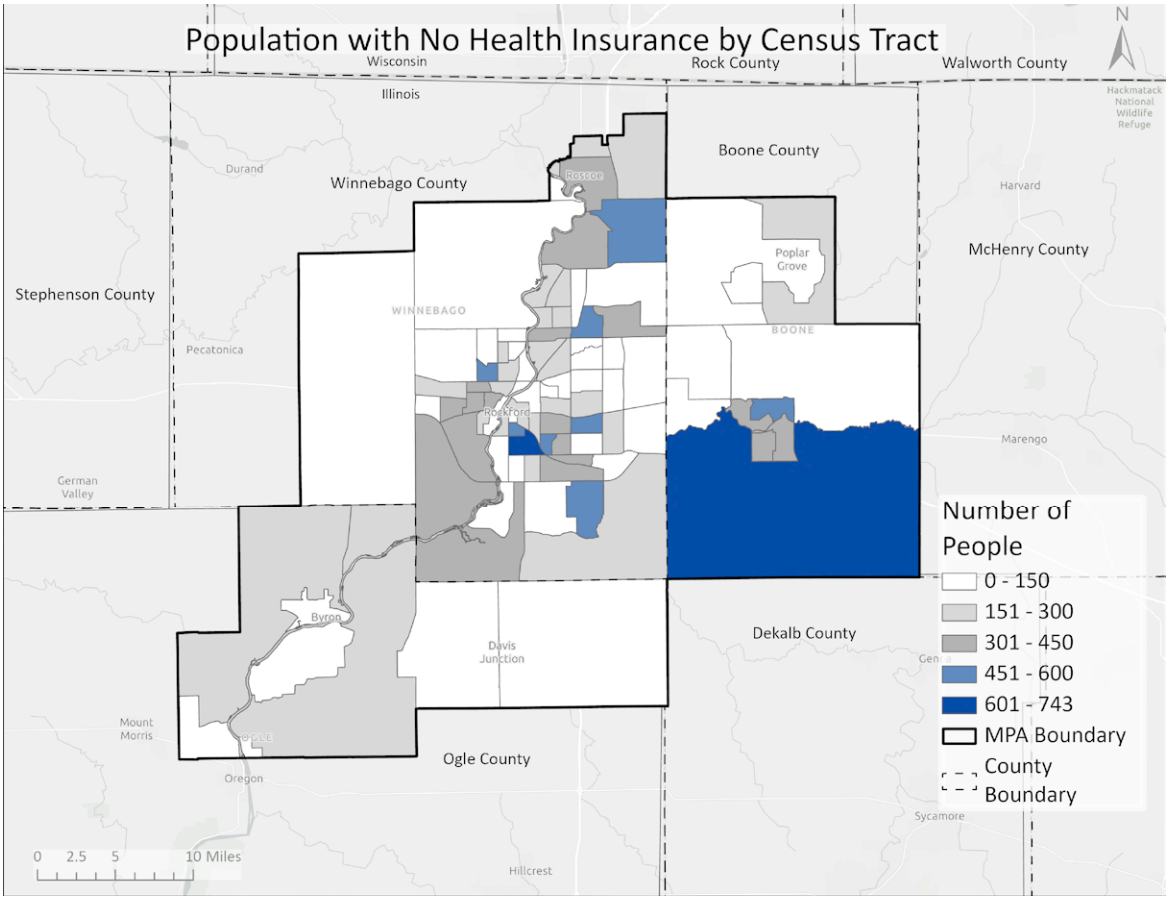
Health Insurance

An estimated 2.1 percent of children in Boone County and 2.7 percent of children in Winnebago County are uninsured. Respectively, approximately 9.2 percent and 9.6 percent of adults aged 19 to 64 in Boone and Winnebago Counties are uninsured, while less than one percent of individuals over 65 years old in both counties are uninsured. Availability of Medicare to individuals over the age of 65 helps explain the low rate of uninsured individuals in this age group[vi].

Figure 2-11 shows the geographic distribution of individuals without health insurance within the Rockford MPA. The southern parts of Boone County, which encompasses portions of Belvidere, has the highest concentration of census tracts containing several hundred individuals without health insurance. Many census tracts in southern Rockford and the northern part of the MPA have notable amounts of uninsured individuals, as well.

The majority of children in the region do have some form of health insurance coverage. In the region, the predominant form of health insurance for children is through their parent or guardian's employer-based plan, covering 46 percent of children. The second most common coverage type for children is Medicaid/means-tested public coverage (40 percent). Approximately three percent of the region's children have no health insurance coverage which places them at high risk for negative health outcomes.

Figure 2-11: Population with No Health Insurance by Census Tract



Source: Region 1 Planning Council

Table 2-5: Children's Health Insurance Status

Types of Health Insurance Coverage by Age	Boone County	Winnebago County
Total:	53,189	282,411
Under 19 years:	14,212	70,500
With one type of health insurance coverage	12,869	63,194
With employer-based health insurance only	8,147	30,620
with direct-purchase health insurance only	449	2,313
With Medicare coverage only	0	460
With Medicaid/means-tested public coverage only	4,273	29,570
with TRICARE/military health coverage only	0	231
With VA Health Care only	0	0
With two or more types of health insurance coverage:	1046	5,062
With employer-based and direct-purchase coverage	13	579
With employer-based and Medicare coverage	0	32
With Medicare and Medicaid/means-tested public coverage	0	179
Other private only combinations	40	69
Other public only combinations	63	0
Other coverage combinations	930	4,193
No health insurance coverage	297	2,254

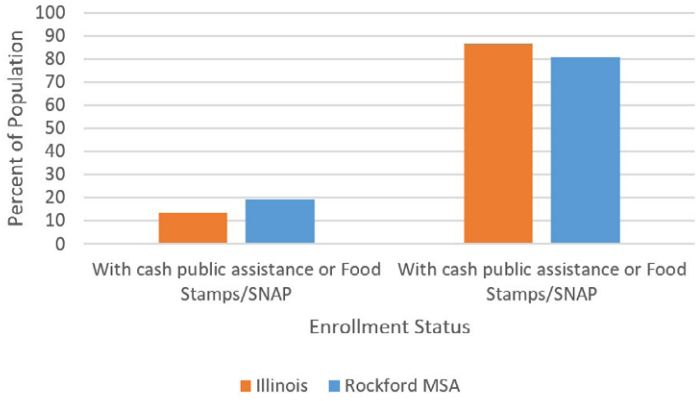
Source: American Community Survey

Supplemental Nutrition Assistance Program Enrollment

Supplemental Nutritional Assistance Program (SNAP) enrollment is a federal program that provides food benefits to low-income families, enabling them to afford nutritious food essential to health and well-being.[viii] Often referred to as food stamps, this program supports the health and development of children of low-income households.

In the Rockford Region, about 14 percent of households receive SNAP benefits. This figure is higher when examining Winnebago County households as 19 percent receive these benefits. About 12 percent of Boone County households receive SNAP benefits. These rates of SNAP enrollment indicate the affordability of nutritious food is an area of concern for the Rockford Region.

Figure 2-12: SNAP/Food Stamp Enrollment



Source: American Community Survey

PART 3:

Social Determinants of Health

Social determinants of health (SDOH) are the external, non-medical factors that affect the health trajectory of individuals in the environments where they are born, live, work, grow, and age.[ix] The SDOH are prioritized in Healthy People 2023, the United States' ten-year framework for improving public health and addressing national health disparities. This initiative is managed by the Office of Disease Prevention and Health Promotion (ODPHP) under the HHS.

Conditions, such as poverty, the quality of neighborhoods, social inclusion, and employment, can shape and influence health outcomes of individuals and communities. These outcomes are inequitably distributed among the U.S. population with exposure and severity partially dictated by factors such as socioeconomic status, sex, age, ability and mobility, race and ethnicity, and gender, among others.

The SDOH highlight the role that social, economic, and environmental factors play in shaping health outcomes. Several studies suggest that these determinants may have a more significant impact on health than healthcare or lifestyle choices, accounting for between 30 to 55 percent of health outcomes. Therefore, understanding the interconnectedness of these determinants and human health is crucial for promoting health equity and improving community health.

Under Healthy People 2023, the SDOH are grouped into five domains:

- Economic Stability,
- Education Access and Quality,
- Health Care Access and Quality,
- Neighborhood and Built Environment, and
- Social and Community Context.[x]

These determinants are derived from an extensive body of research and public health literature. The five domains provide a framework for understanding the various factors that influence health outcomes and disparities, from socioeconomic status to an individual's physical environment, social network, and proximity to resources.

Transportation influences a variety of factors for each individual and household, including where they live, how they travel to work and school, and how they access basic needs such as health care and nutritious food. Every year millions of people in the United States forego medical care due to transportation-related issues.[xi] Through the lens of each SDOH, equitable transportation policies and access have the potential to improve health outcomes for individuals and communities. The following paragraphs discuss different aspects of each determinant through a transportation lens, including main drivers, health impacts, and regional context.

Figure 3-1: Healthy People 2023 Social Determinants of Health

Source: U.S. Department of Health and Human Services

Social Determinants

The social determinants of health are the contexts of our lives. They are determinants of health which are outside of the individual. They are beyond individual behaviors and beyond individual genetic endowment. Yet these contexts are not randomly distributed, but are instead shaped by historical injustices and by contemporary structural factors that perpetuate the historical injustices.[xii]

Source: Camara Phyllis Jones, MD, MPH, PhD

Economic Stability

A household's economic stability is determined by their ability to work, earn a living wage, afford safe housing, and access healthy food. The main objective associated with economic stability is to reduce the proportion of people living in poverty which, in turn, will promote increased access to health needs. In 2021, 9.3 percent of Boone County residents and 15.9 percent of Winnebago County residents were living below the poverty level, with a respective 13.4 percent and 25.2 percent of those residents recorded as children.[xiii]

Table 3-1: Poverty rates in United States, Illinois, Boone County, and Winnebago County

	Number below poverty level	Percentage below poverty
United States	40,661,636	12.6%
Illinois	1,483,378	11.8%
Boone County	4,938	9.3%
Winnebago County	44,563	15.9%

Source: U.S. Census Bureau

Income is a main driver of access to quality healthcare, education, food, and safe housing. Households designated as low-income often experience financial barriers that restrict the accessibility and affordability of such needs; this increases their likelihood of experiencing negative health outcomes such as chronic diseases and illnesses. Additionally, individuals living in poverty are more likely to experience chronic disease, mental illness, higher mortality, and a lower life expectancy.[xiv] Addressing economic disparities and fostering economic stability can improve individual health and contribute to the overall well-being and resilience of communities.

Safe, accessible, and reliable transportation options can help individuals access employment and provide them with the financial resources necessary to become economically stable and meet their health needs. Furthermore, improved access to transportation facilitates easier acquisition of healthy food, thereby reducing rates of food insecurity, undernutrition, and hunger.

Food Insecurity

Food insecurity is a household-level socioeconomic condition in which access to adequate food is limited or uncertain. [xv]

Source: USDA Economic Research Service (ERS)

Households can become food insecure if access to nutritious food is limited or uncertain. In 2021, 9.1 percent of households in Boone County and 11.9 percent of households in Winnebago County were food insecure at least one time during the year.[xvi] Food insecurity may lead to conditions, such as undernutrition and hunger, which are associated with chronic diseases such as diabetes, heart disease, and high blood pressure, as well as developmental delays and behavioral issues in children. [xvii, xviii]

Ultimately, access to transportation is a critical determinant of economic stability. Addressing transportation barriers and promoting equitable access to transportation options can support economic stability and improved health outcomes.

Education Access and Quality

Educational attainment greatly influences health and well-being throughout an individual's life. Educational opportunities are often interconnected with socioeconomic status; these compounded factors impact access to health care resources and employment opportunities. Education provides individuals with the knowledge and critical thinking skills necessary to make informed health-related decisions. For example, higher rates of language and literacy have been shown to improve health outcomes by ensuring that individuals can better access and understand health information as well as properly use medications.[xix, xx] Recognizing the intrinsic link between education and health underscores the importance of equitable educational policies to create healthier communities.

Reliable transportation options can help improve health outcomes by allowing for greater access to schools, educational resources, and support services. Similarly, expanded access to quality education can increase the proportion of students who participate in early childhood education programs, graduate high school, and enroll in higher education. Participating in early childhood education programs and attaining higher levels of education are associated with improved well-being and a lower risk of poverty, chronic disease, and premature death.[xxi]

Table 3-2: Educational Attainment and Median Income in the United States, Boone and Winnebago County (2021)

	Income ($)			
Educational Attainment	United States	Illinois	Boone County	Winnebago County
Less than high school graduate	$26,654	$28,305	$29,624	$25,451
High school graduate (or equivalent)	$33,878	$34,591	$35,006	$31,276
Some college or associate's degree	$40,352	$41,162	$40,491	$39,078
Bachelor's degree	$59,717	$63,240	$57,643	$56,619
Graduate or professional degree	$79,241	$81,497	$86,555	$72,896

Source: U.S. Census Bureau

Higher levels of education are also associated with lower rates of poverty and a decreased risk of health conditions such as mental illness, hepatitis, diabetes, and heart disease. The poverty rate in the Rockford Region is about 1.5 times higher among people who did not graduate high school.[xxii] This discrepancy means that non-graduates are more likely to experience financial barriers to accessing health needs, increasing the risk of negative health outcomes.[xxiii] Additionally, educational opportunities can provide students with resources, such as school lunches and physical education classes, which can reduce rates of childhood obesity, chronic disease, and mental health conditions.[xxiv, xxv]

Health Care Access and Quality

The use of health services, such as primary and preventive care, plays a key role in disease prevention and overall well-being. However, health care access is inequitable in many communities, leading to disparities in health outcomes such as the increased prevalence of chronic diseases among racial and ethnic minority groups. These inequities often stem from restricted access to transportation, which is a primary barrier to health care utilization. A lack of reliable transportation may result in delayed or foregone health care, poor management of chronic conditions such as diabetes, and worsened health outcomes. Many studies have found that individuals with high vulnerability to disease are often the most heavily impacted by transportation barriers. These populations include low-income individuals, individuals with chronic conditions, women, veterans, older adults, individuals experiencing homelessness, and individuals from racial and ethnic minority groups.[xxvi]

Health insurance can improve access to health care and help manage high costs. However, in Boone and Winnebago Counties, a respective 6.0 percent and 6.5 percent of the population are uninsured.[xxvii] Individuals without health insurance are less likely to be able to afford necessary medical services and medications which increases their risk of experiencing negative health outcomes.

Access to health services, such as primary health care, mental health, preventive care, and dental care services, are associated with improved health outcomes and overall well-being. Equitable healthcare access is closely connected to social and economic factors, highlighting the need for policies that address socioeconomic disparities to ensure the widespread availability of comprehensive and timely medical care. Improving and promoting equitable access to such services, potentially through expanded transportation opportunities, can help mitigate health disparities within and between communities.

Neighborhood and Built Environment

Neighborhood conditions and the built environment greatly influence the health outcomes of individuals and communities. The design and safety of communities determine access to physical activity opportunities, healthy foods, public transportation, and exposure to environmental hazards. Well-planned infrastructure, safe neighborhoods, and recreational spaces tend to promote healthy lifestyles, encouraging people to engage in regular exercise and reducing stress levels. Conversely, poor neighborhood conditions, such as degraded air quality, a lack of sidewalks, and high levels of crime, can jeopardize health and safety.

Built Environment

The built environment refers to the man-made, physical aspects of the environment such as building, homes, infrastructure, and streets.

Neighborhood and community design can create environments that foster and improve health outcomes if it recognizes the interdependence of health and the physical spaces. Exposure to air pollution and extreme heat is higher in urban areas where there are generally more sources of pollution, more paved surfaces, and less green space. As a result, urban communities are often more susceptible to experiencing health challenges and chronic diseases related to poor air quality and exposure to extreme heat.

An individual's neighborhood can also influence health outcomes through the presence of safe, accessible transportation infrastructure that ensures reliable access to needs such as healthy food, employment, education, and health care. In communities with limited public transportation options, individuals may face significant barriers in reaching grocery stores, healthcare providers, and pharmacies resulting in disparities in healthcare access and outcomes. For example, low-income neighborhoods often have limited transportation options and are located further from grocery stores. These neighborhood conditions may create further barriers to healthy outcomes. In Boone and Winnebago Counties, a respective two and eleven census tracts within each county were classified as both low-income and low-access in 2021.[xxviii]

Low-income & Low-access

Low-income and low-access refers to low-income census tracts with at least 500 people, or a third of the residents, living more than one mile from the nearest food store in urban areas and 10 miles in rural areas.[xxix]

Source: Illinois Department of Public Health

Alternative modes of transportation, such as walking, cycling, or using public transit, necessitate physical activity. Physical activity is crucial for maintaining overall good health and preventing chronic diseases such as obesity, heart disease, stroke, and diabetes.[xxx] Safe and accessible transportation infrastructure can support individual and community health and greatly contribute to injury prevention. Health and well-being can be negatively impacted by unsafe transportation methods that increase the risk of accidents or injury, such as inadequate infrastructure for pedestrians and cyclists or insufficient public transit safety measures.

While transportation, housing, and infrastructure have historically contributed to inequitable community health outcomes, these systems can also be used to address and improve health outcomes through planning and design. For example, enhancing and expanding community walking trails, cycling paths, and public transportation can promote physical activity. Additionally, the increased use of active and public transportation can reduce traffic-related emissions thereby lowering community exposure to air pollution.[xxxi]

Social and Community Context

An individual's social and community context encompasses their relationships, social networks, and support systems. Strong social ties and supportive communities contribute to mental well-being, resilience, and a sense of belonging, all of which are crucial elements of good health. This social support can reduce feelings of loneliness and lower the risk of conditions such as depression, anxiety, high blood pressure, and heart disease.[xxxii] Conversely, social isolation or strained community relationships can lead to increased stress, negatively impacting mental and physical health.

Communities that foster inclusivity, social cohesion, and equitable access to resources tend to promote better health for their residents. Such measures include addressing social inequities and providing opportunities for socialization and civic engagement, such as through increased options for transportation to work, school, community events, and family gatherings.[xxxiii]

Social support is generally lower among vulnerable populations, such as those with lower levels of educational attainment, older adults, and those who speak English as a second language. Equitable access to transportation can improve social health by addressing barriers to social opportunities, promoting social inclusion, and reducing social isolation among the above populations.

PART 4:

Transportation & the Built Environment

The health of a community is directly related to its transportation system and the built environment. The transportation system has the ability to both solve health problems and create them. Examining the relationship between transportation, the built environment, and health in the Rockford Region not only highlights opportunities for public health improvements but also exposes health correlations with transportation infrastructure. The challenges illustrated in this chapter disproportionately affect vulnerable populations, including the elderly, low-income households, disabled persons, and children.[xxxiv]

Community Design

The design of a community's built environment connects its overall health. Residents of densely developed areas or areas with minimal greenspace can be subjected to higher temperatures by land use decisions and the materials used in buildings. Furthermore, the built environment can support or inhibit the movement of individuals with cognitive or physical disabilities. The application of universal design principles and compliance with the Americans with Disabilities Act can support all individuals' right to access and mobility.

Urban Heat

Northern Illinois will see an increase in the number of very hot days in the remainder of the 21st century. The Illinois State Climatologist (ISC), from the University of Illinois-Urbana Champaign, defines a very hot day as any day in which the high temperature exceeds 95 degrees Fahrenheit.[xxxv] Northern Illinois currently experiences one to two very hot days per year.[xxxvi] If low greenhouse gas (GHG) emission targets are reached, ISC projects the number of very hot days will increase from 10 to 60 by 2090[xxxvii]. If GHGs continue to be emitted at a high rate, ISC predicts the range will increase to 25 to 90 days per year by 2090.[xxxviii]

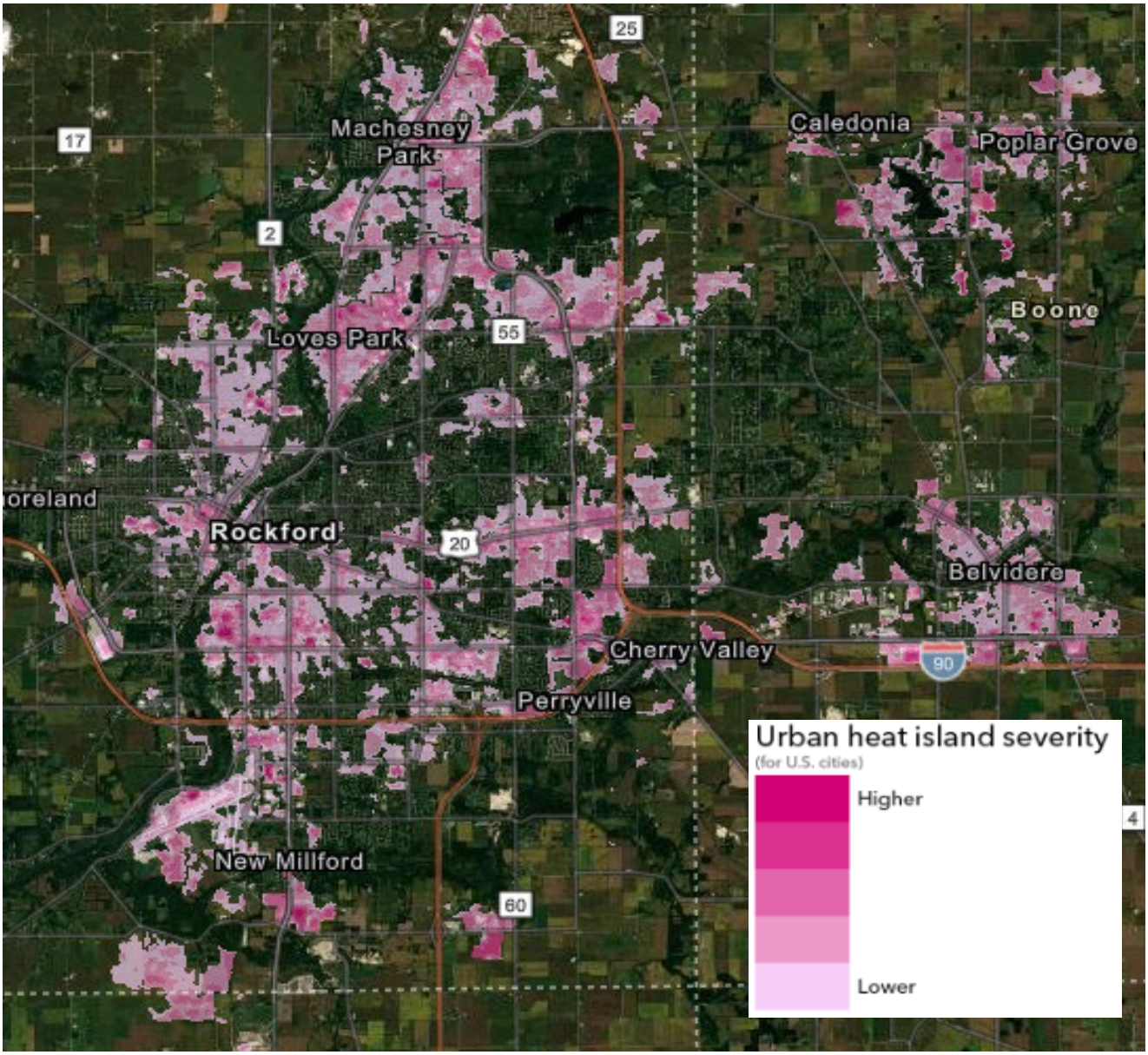
Urbanized areas will especially feel the effects of these very hot days. Due to their increased levels of development, urban areas contain surfaces that absorb and re-emit heat such as buildings and roads.[xxxix] The absorption and re-emittance of energy from these surfaces means that parts of an urban area can be one to seven degrees warmer during the day and two to five degrees warmer at night compared to nearby outlying areas.[xl] Areas where this phenomenon occurs are called urban heat islands (UHI).

Urban heat islands have multiple causes. For example, a reduction in natural landscapes in urban areas can result in less moisture to cool the air and reduced shade.[xli] Urban heat islands can be exacerbated by the use of specific materials in roofing and pavement construction, which increase the absorption of solar energy. Additionally, the dimensions and spacing of buildings can obstruct wind flow in the area.[xlii] Heat released from human activities, such as vehicles and industrial facilities, can also increase the amount of energy being absorbed by surfaces in the UHI.[xliii]

The effects of UHIs and the expected increase in very hot days means that populations vulnerable to heat-related illnesses will be at a higher risk. Due to a combination of physical and social factors, low-income communities, people of color, and the elderly will be the most affected.[xliv] These communities are more likely to work outdoors, potentially in a UHI, or lack access to air-conditioning units to help keep them and their homes cool.[xlv] The heat poses an especially great physical risk to elderly people as their bodies may struggle to cool themselves.[xlvi]

The Trust for Public Land has produced a map showing UHI severity, and the general vulnerability trends discussed above are reflected in the map of the region.[xlvii] The industrial areas along Kishwaukee Street and Harrison Avenue in Rockford see the highest intensity in the region, and this in turn affects the low-income residential areas around them. Downtown Rockford and downtown Belvidere also have high levels of UHI severity, due to the density of development in these areas. Residential areas in Loves Park near North Second Street are heavily affected, and areas with large paved parking lots, such as Cherryvale Mall, have high rates of UHI severity.

Figure 4-1: Urban Heat Island Severity Map



Source: Trust for Public Land

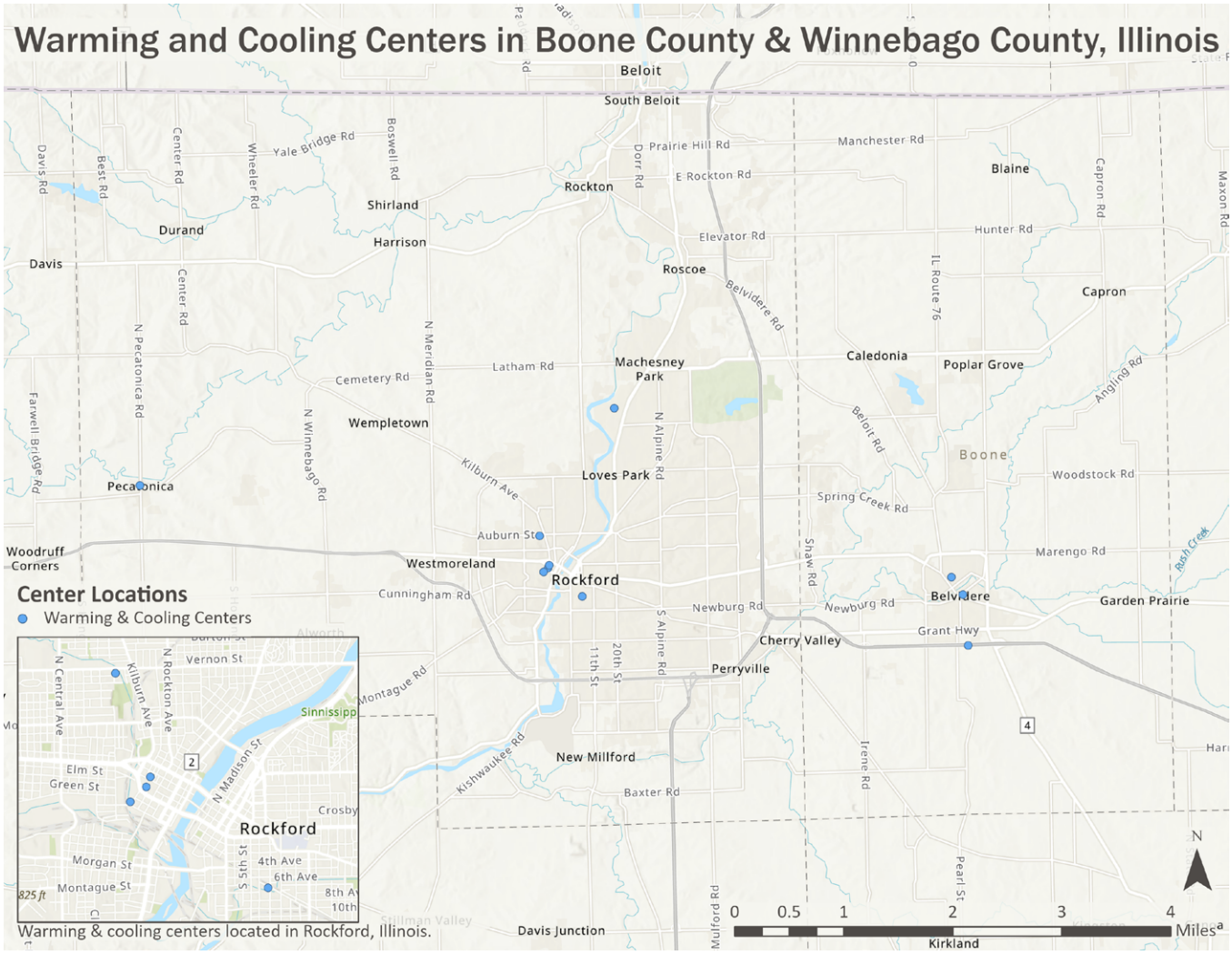
There are various ways to combat the effects of UHIs within urban areas. Planting trees during regular street maintenance and capital improvement projects can help provide more shade in urban areas.[xlviii] Trees also reflect radiation from the sun and release moisture into the air; both of these effects help keep the air cool. Placing vegetation on sidewalks, rooftops, and medians counters the effects of UHI.[xlix] Vegetation on a rooftop, called a green roof, can help provide direct and ambient cooling effects by reducing the amount of solar energy absorbed by buildings.[l] Reducing emissions from human uses, such as transitioning from gas-powered vehicles to the active transportation mode, also helps to cool cities. During extremely hot days cooling centers can serve as a safe haven for those suffering from heat exposure, especially those without houses.

Cooling Center

A cooling center (or "cooling shelter") is a location, typically an air-conditioned or cooled building that has been designated as a site to provide respite and safety during extreme heat.

Source: CDC

Figure 4-2: Warming and Cooling Centers in Boone & Winnebago County



Source: WinGIS

Universal Design

Universal design (UD) is defined by its creator, Ronald Mace, as "the design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design".[li] Universal design is an effective approach when attempting to serve people with mobility, visual, hearing, and other disabilities.[lii] It specifically benefits the quarter of the American population that will experience a disability at some point during their life[liii], but it is also intended to benefit all users.

A central component of UD is the belief that access should be designed in a way that serves the maximum amount of people. Proponents of the approach emphasize that UD intertwines accessibility into the design so seamlessly that users are not able to perceive the design includes accessibility features. The goal of UD is to make access experiences simple and to provide access options for a variety of users.[liv] To achieve these goals, UD follows seven guiding principles[lv]:

- Equitable use,
- Flexibility in use,
- Simple and intuitive use,
- Perceptive information,
- Tolerance for error,
- Low physical effort, and
- Size and space for approach and use.

A significant benefit of UD is its role in boosting mobility among older adults, which facilitates aging in place.[lvi] Another advantage of UD is its ability to go beyond the Amerucans with Disabilities Act's (ADA) focus on structural accessibility and address accessibility concerns related to mental health, cognitive disabilities, and neurodiversity.[lvii]

Universal design aligns well with projects that have progressive design goals. Public institutions, such as workplaces, schools, and cultural institutions, often share these progressive design principles with UD. The new Rockford Public Library in downtown Rockford is an example of UD implementation. At-grade with the sidewalk, the building entrance is accessible by way of a wide sidewalk featuring several pathways framed by planters. The library also has an outdoor patio on the first floor facing the river which does not require the use of stairs.

Universal design as an approach is not without challenges. For example, it is often perceived as leading to higher costs and criticized for its lack of aesthetic appeal.[lxiv] This perceived unattractiveness is usually linked to the belief that UD does not match the historical appearance of an area. Lastly, implementation of UD lacks clear guidelines which can make it difficult for planners, architects, and municipal staff to use the approach.[lxv]

"Aging in Place"

"Aging in place" refers to a person's ability to live in their own home and community safely, independently, and comfortably, regardless of their age, income, or ability level.

Source: Rural Health Information Hub

"At-grade"

"At-grade" is to be at the same level. In this example, the doorway is at the same level as the sidewalk.

Americans with Disabilities Act

Nearly two million people with disabilities live in the United States, and approximately 560,000 of them rarely or never leave home due to transportation difficulties.[lviii] This issue arises partly because the transportation infrastructure is tailored to personal automobiles which are frequently inaccessible to many individuals with disabilities.[lix] To help provide people with disabilities a reliable form of mobility, the Americans with Disabilities Act (ADA) focuses on ensuring public transit is accessible to all people. The goal of the ADA is to ensure all persons in the U.S. are accounted for when transportation decisions are made, allowing everyone to have access to opportunities in employment, health care, housing, and community life.

Title II of the ADA addresses public transit specifically. This section states that all new vehicles, rail stations, and facilities used in public transit must be accessible.[lx] Transit specific ADA requirements are often met through the use of UD features, such as a low-floor bus with ramps and audible stop announcements.[lxi]

Additionally, transit operators must provide on-demand door-to-door paratransit services for people who cannot access fixed-route transit.[lxii] This mainly applies to rural areas that do not have rail or fixed-route bus systems. Boone County Public Transit and Lee-Ogle Transportation System (LOTS) provide this door-to-door service for people with disabilities within their jurisdictions, as does Rockford Mass Transit District (RMTD). Winnebago County Rural Transit plans to provide service to the areas of Winnebago County that are not inside RMTD's service area, beginning in 2025.

The ADA is also concerned with right of way for disabled users of the pedestrian network. Intersections need to have curb ramps, bus stations need to be accessible, and barriers blocking progress on the sidewalk, such as signs, need to be moved or removed.[lxiii] While compliance with these regulations is required by the ADA, many jurisdictions fall short of total compliance.

Americans with Disabilities Act (ADA)

The ADA is a federal civil rights law that prohibits discrimination against people with disabilities in everyday activities. Common activities covered by the ADA include employment, state and local government services, public transit, businesses that are open to the public, and telecommunications.

Source: U.S. Department of Justice Civil Rights Edition

Active Transportation

Active transportation can be defined as any human-powered form of mobility. The most common forms of active transportation are walking, biking, and rolling. There are numerous health benefits associated with utilizing these active modes as a means of getting to and from locations or as a recreational activity. The region features 198.2 miles of bicycle facilities, mainly consisting of 129.8 miles of shared use paths as well as 1,230 miles of sidewalks. From 2017 to 2021, 1.6 percent and 0.7 percent of Winnebago and Boone County residents, respectively, used these active transportation facilities to travel to work.[lxvi]

Many studies have examined the relationship between a person's health and their use of active transportation.[lxvii] A 2007 study by the University College of London found that three hours of walking per week at two-miles-per-hour reduces cardiovascular disease (CVD) by 31 percent and all mortality events by 32 percent.[lxviii] Adults who take 8,000 steps one to three days per week have approximately 8 percent less chance of dying from a cardiovascular event.[lxix] A 2023 study of U.S. adults found that adults who take over 8,000 steps one to two days a week have a 14.9 percent lower all-cause mortality rate than those who do not.[lxx] This risk reduction increases to 16.5 percent when 8,000 steps are taken three or more days each week.[lxxi]

Another study found that bicyclists have an 18 percent lower risk of developing heart disease than non-bicyclists.[lxxii] Additionally, biking has been shown to reduce an individual's all-cause mortality rate. A 2000 study conducted in Copenhagen found that biking to work reduced all-cause mortality by nearly 40 percent.[lxxiii] Biking for at least an hour each day, either as a means of transport or a form of recreation, reduced the all-cause mortality rate by 18 percent.[lxxiv]

Using active transportation also can have a positive impact on the overall mental health of a community. As little as 30 minutes a day of low-intensity exercise can increase positive moods and reduce stress.[lxxv] One study found that women with depression saw a 9 percent increase in vitality, physical, and social functioning when they walked just 30 minutes a day.[lxxvi] The study also notes the mental health benefits of active transportation are not limited to only those with existing mental health issues as it boosts the mood of all participants.[lxxvii] Biking to work is shown to have similar benefits to an individual's mental health with decreasing depression and anxiety rates.[lxxviii]

Active transportation creates more opportunities for social interaction and chance encounters with friends, neighbors, or businesses than compared to travel in a personal vehicle. Having increased social interactions can help to combat loneliness, which is estimated to affect one in three Americans.[lxxix] The Center for Disease Control (CDC) notes that incorporating active transportation into one's daily routine can provide opportunities for social engagement that improve mental health.[lxxx]

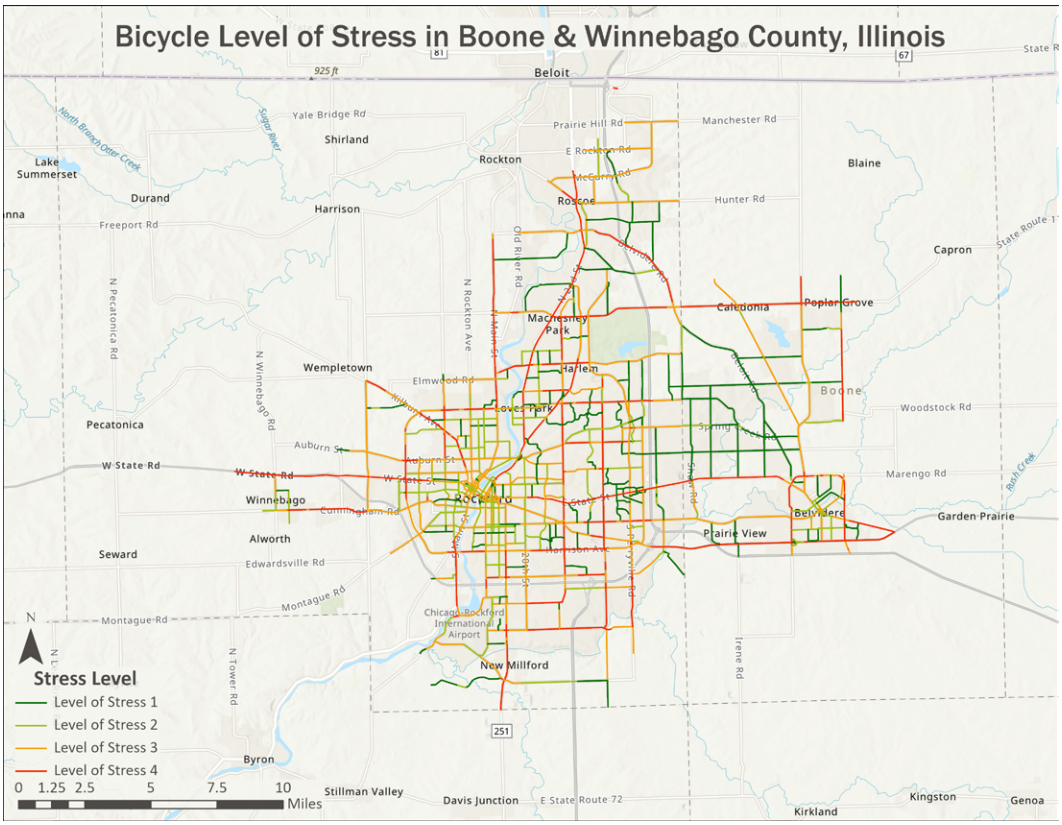
Vulnerable communities can experience positive health impacts when the use of active transportation is supported. Vulnerable communities are at higher risk for specific health risks, such as Type II Diabetes, due to a lack of access to healthy foods[lxxxi], but active transportation can help mitigate some of these effects. Biking for at least 30 minutes a day reduces the likelihood of developing type II diabetes by 40 percent, therefore providing adequate active transportation infrastructure can help to mitigate this risk.

The CDC emphasizes the health benefits that result from increased physical activity, such as higher quality of sleep and reduction of anxiety and blood pressure.[lxxxii] Long term benefits of active transportation use include reduced risk of dementia and depression as well as a lower risk of heart disease, stroke, and type II Diabetes. Active transportation users have a lower risk of developing eight different cancer types, including lung, breast, and stomach cancer. Other benefits indicated by the CDC include a reduced risk of weight gain and improved bone health. These benefits, along with others, contribute to a healthier life for children who engage in regular physical activity.

Quality active transportation infrastructure greatly improves the safety of those using active transportation. Sidewalks and intersections must be ADA-compliant to ensure accessibility, especially to individuals who travel by mobility devices, such as a walker and wheelchair. Improving bike infrastructure, through the development of bike lanes and shared use paths, reduces the risk of a bicyclists involvement in a crash with a motor vehicle. The CDC indicates that a major obstacle stopping people from using active transportation is the lack of bicycle facilities, sidewalks, crosswalks, and the threat of traffic.[lxxxiii] Improved safety may encourage more people to use active transportation.

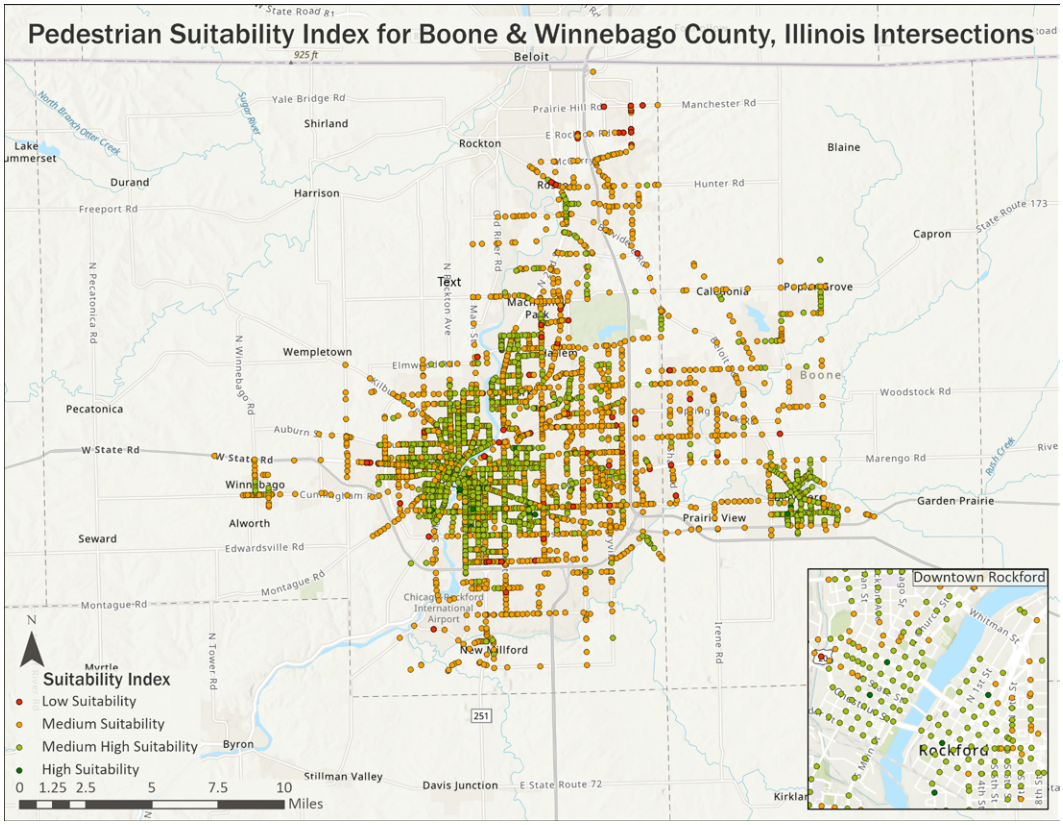
The region's existing transportation network could be improved to better address the needs of active transportation users. Large sections of the region place a high level of stress on bicyclists as show in Figure 4-3. This is particularly true for the Strategic Regional Arterials (SRA). While SRAs provide mobility and access for personal and commercial vehicles, they largely deny active transportation users from enjoying these benefits. Examining the pedestrian suitability of the regions roadways reveals similar trends related to bicycle stress. These trends are seen in Figure 4-4. Outside of the dense urban cores of Rockford and Belvidere, the majority of the region is not suitable for travel by walking or rolling. More information about Bicycle Level of Stress Index and Pedestrian Suitability Index can be found in the 2023 Bicycle & Pedestrian Plan for the Rockford Metropolitan Area.

Figure 4-3: Bicycle Level of Stress Index



Source: WinGIS

Figure 4-4: Pedestrian Suitability Index



Source: WinGIS

Public Transportation

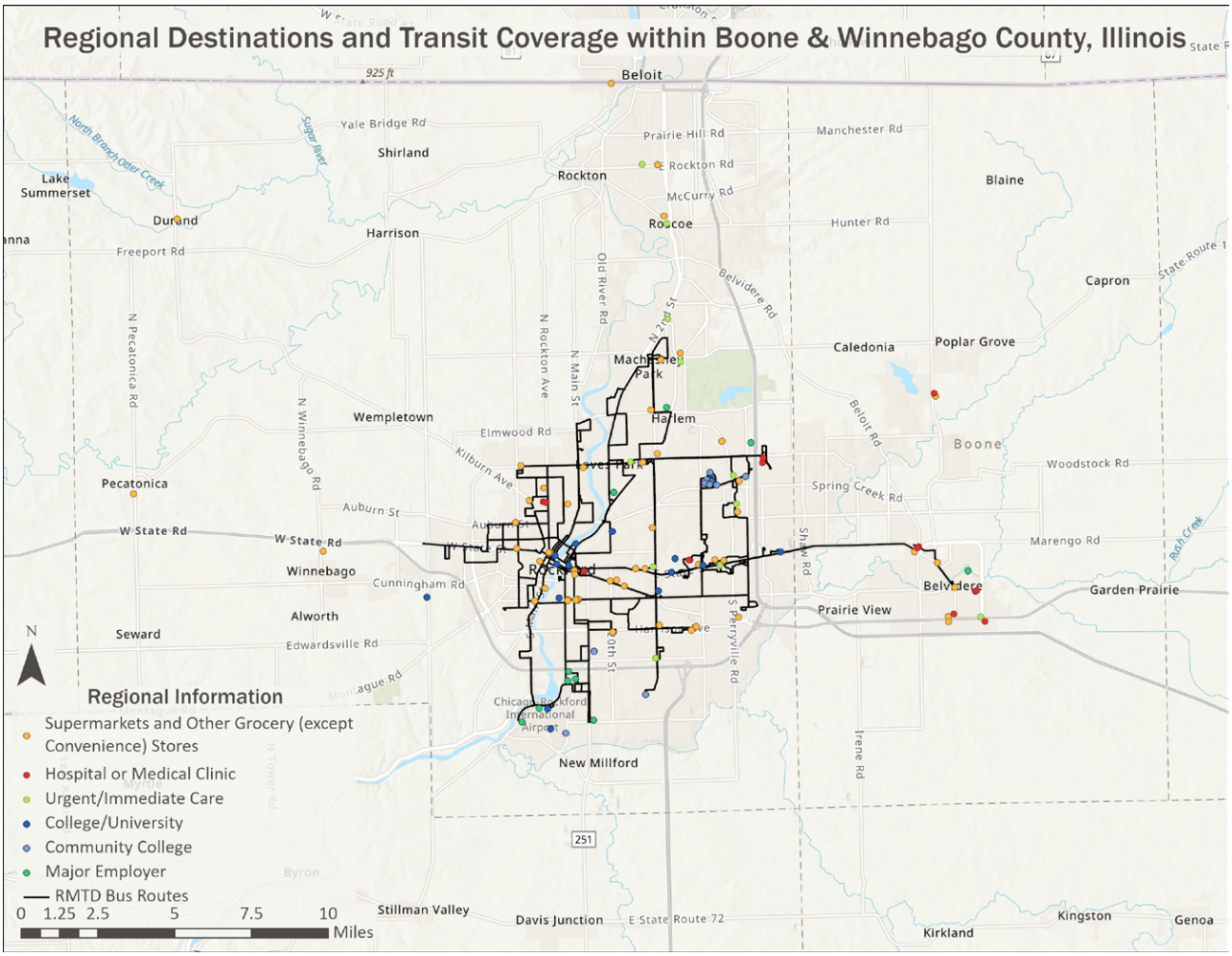
Public transportation is a mode of transportation that provides regular and continuous service to the public through the use of buses, streetcars, subways, light rail, and ferries. Users of these services contribute to the funding of the transportation system by paying a set fare for each trip. Public transportation services are funded at the federal, state, and local level and can be described as a public service similar to emergency and mail services. Accessible, convenient, and affordable public transit is a key design principle for healthy communities, according to the CDC.[lxxxiv]

For older adults, public transportation access means a decreased risk of early mortality and dementia.[lxxxv] For example, older adults and disabled persons who cannot drive may be able to avoid social isolation and access key regional destinations through the use of public transportation.[lxxxvi] All members of vulnerable communities, including low-income communities, who lack reliable personal transportation can benefit from access to healthier food, employment, vital services, and recreational opportunities provided by public transportation.[lxxxvii]

In the Rockford Region, the primary public transportation service provider is RMTD, which has provided the Rockford Urbanized Area with fixed-route transit services for over 50 years. The majority of RMTD's service area is located within the City of Rockford, but its routes extend to provide service to Loves Park and Machesney Park. One-way trip fares start at $1.50, all-day passes are available for $3, and monthly passes cost $55. Routes operate fully from 4:15 a.m. to 6:15 p.m., and reduced service continues until 12:15 p.m. The vast majority of medical facilities, employment centers, and grocery stores in the region are located along RMTD routes.

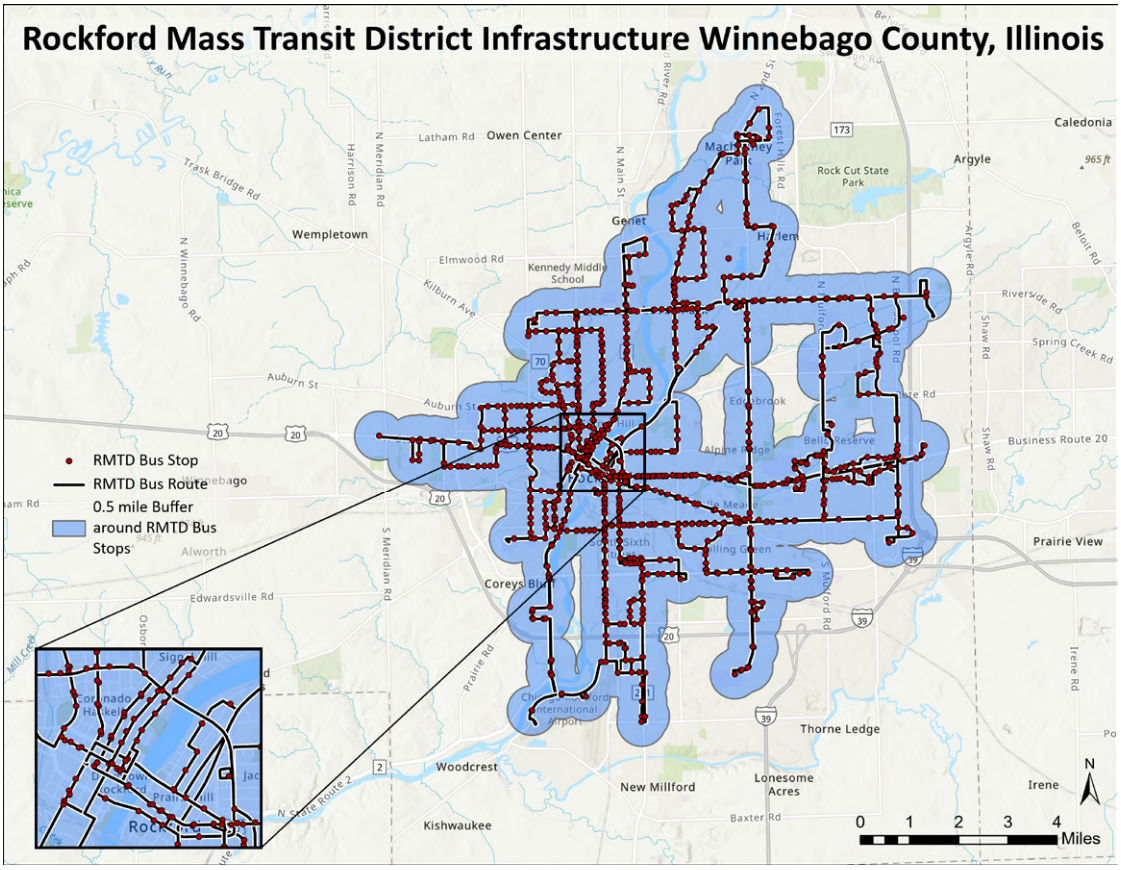
In Winnebago County, 0.9 percent of work trips were by public transportation in 2021.[lxxxviii] In 2021, 0.2 percent of Boone County residents took public transportation to work.[lxxxix] The City of Belvidere has historically been served by a sole fixed route, but RMTD service on this route ended in July 2024.

Figure 4-5: Regional Destinations and Transit Coverage Map



Source: WinGIS

Figure 4-6: Proximity to Transit



Source: WinGIS

Several paratransit services help to fill the gaps in RMTD's network. Rockford Mass Transit District itself provides paratransit service in Rockford, Loves Park, and Machesney Park. Boone County Transit (BCT) provides on-demand transportation to all residents of Boone Country, and Stateline Mass Transit District (SMTD) provides the same service to all residents of Rockton, Roscoe, South Beloit, and the unincorporated areas of Rockton Township. Paratransit is also available for the portion of Ogle country that falls into the Metropolitan Planning Area (MPA), with Reagan Mass Transit District as the provider. This origin-to-destination service provides transportation for older adults and disabled persons who do not have the ability to use or access personal transportation or RMTD fixed-routes. Winnebago County Rural Transit will cover the remaining portions of the county not in RMTD's service area, which is scheduled to begin in 2024.

Human Service Providers

The Enhanced Mobility of Seniors & Individuals with Disabilities program (Section 5310) is a federal program dedicated to funding projects that enhance the mobility of seniors and individuals with disabilities.[xcii] The funds are available to both urban and rural areas and help to fund paratransit services. Traditionally, Section 5310 funds are used to purchase accessible buses and vans, wheelchair lifts and ramps, and transit-related information technology systems.[xc] The funds from Section 5310 can also be used to cover a portion of the operating costs of an on-demand transit service.[xci]

A Human Service Transportation Plan (HSTP) is a federally required document that identifies and addresses transportation service challenges affecting transit-dependent individuals. This group includes seniors, individuals with disabilities, and low-income individuals. These groups must be engaged during the development of the plan to verify their transportation needs. The plan looks for strategies, activities, and projects to address the gaps between existing services and needs, and prioritize the implementation of these strategies based on funding and feasibility.

The Rockford Metropolitan Planning Organization (MPO) most recently produced an HSTP for the Rockford MPA in 2021. The plan identifies gaps in the current system, including but not limited to long headways, limited-service times, lack of service information, and poor stop infrastructure. Service, access, coordination, and awareness were identified as the main categories in need of improvement, and 20 strategies were developed and prioritized to address the needs of transit-dependent individuals. The plan can be read in full on the R1 website at https://r1planning.org/research-reports/ under Federally Required Planning.

Shared Mobility and Micro-mobility

Shared mobility is the sharing of transportation services and resources between users. Ride-hailing, car-sharing, carpooling, and micro-mobility services, such bike-sharing and scooter-sharing, are common examples of shared mobility services.[xciii] While differences between services exist, each plays an important role in supporting community health.

Ride-Hailing & Ridesharing

Ride-hailing is the practice of arranging for travel in a private vehicle driven by its owner for a fee. Traditionally provided by taxi services, ride-hailing services have existed in the region for decades. In the late 2000s, Transportation Network Companies (TNCs) entered the market, allowing ride-seekers to use a mobile app to hail a ride. Ride-hailing services, through TNCs, are provided by individuals who choose to use their personal vehicles to provide rides for others. Uber and Lyft are the two authorized TNCs in the Rockford Region, as an alternative to traditional taxi services. Ride-hailing allows people to quickly receive a ride to a grocery store or medical facility but does come at a higher cost than public transportation.

Uber and Lyft are exploring partnerships with hospitals and healthcare systems to better serve these locations.[xciv] Both companies currently offer Health Insurance Portability and Accountability Act (HIPPA) compliant ride-hailing services throughout the United States, called Uber Health and Lyft Healthcare. Health care providers can contract with Uber Health and Lyft Healthcare, which allows them to book rides for patients. These services include door-to-door services for riders who are ambulatory or use wheelchairs. The presence of these services in the region are discussed in more detail in Part 6: Looking Forward.

Health Insurance Portability and Accountability Act (HIPPA)

A major goal of HIPPA is to assure that individuals' health information is properly protected while allowing the flow of health information needed ti provide and promote high quality health care and to protect the public's health and well being.

Source: U.S. Department of Health & Human Services

Ridesharing is similar to ride-hailing, but differs as its vehicles contain multiple passengers going to various destinations. Uber and Lyft offer these services in many cities across the U.S., but the Rockford Region is not currently covered. Ridesharing services are typically offered at a lower cost to ride seekers than traditional ride-hailing. Traditional grassroots carpool networks fall into the category of ridesharing with many carpools existing throughout the region. Ridesharing's greatest health benefit is the reduction in total vehicles on the road. Fewer vehicles result in less congestion, which in turn means less vehicle emissions, improving the air quality in the region.

Car-sharing is another service that helps provide mobility to individuals who do not have access to a personal vehicle. Users pay a membership fee and gain access to a fleet of shared vehicles throughout their region. The Rockford Region currently lacks car-sharing services, but the availability of such services could change in the future. It is estimated that one car-sharing vehicle can replace up to 20 personal vehicles, reducing emissions by nearly 20 percent.[xcv]

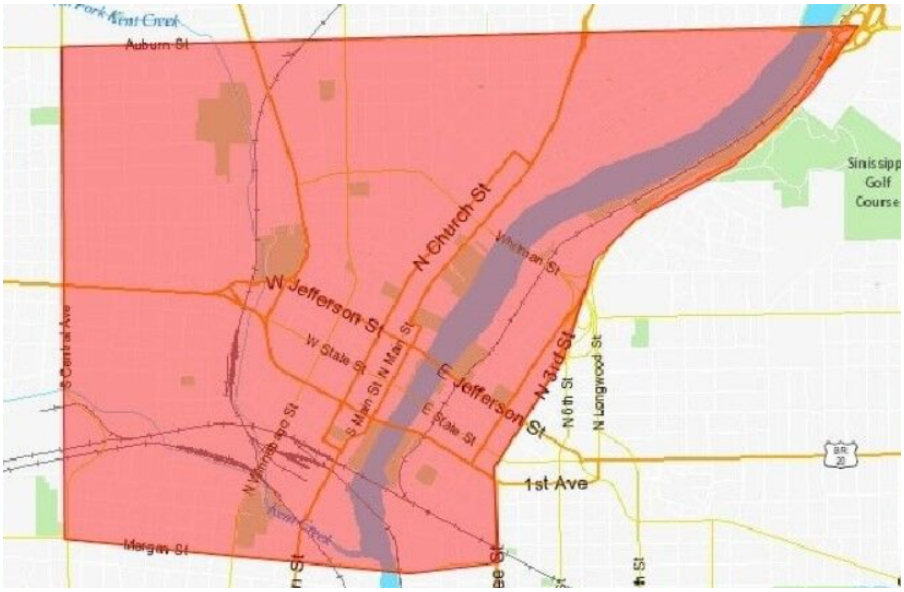
Micro-mobility

Shared micro-mobility services provide individuals with an alternative mobility option for short to medium length trips. A personal vehicle or ride-hailing service would traditionally be used for trips of this length, but bike-sharing and scooter-sharing services can replace these trips. Individuals can use an app on their phone to pay to use a bike, e-bike, or e-scooter. Often this trip must begin and end at a docking station where the bike or scooter is stored, but some services allow the bike or scooter to be left anywhere. Similar to ride-hailing and ridesharing, the presence of these services helps to reduce the number of vehicles on the road. In 2019, 36 percent of shared micro-mobility trips in North America replaced what would have been a motorized vehicle trip.[xcvi]

Shared micro-mobility offers many of the same health benefits as alternative transportation and offers services at a lower capital cost to individuals. Users are not required to make a substantial upfront investment to purchase their own bike or scooter; shared micro-mobility services allow users to spend between $2.80 and $4.70 on a 12-minute trip.[xcvii]

E-bikes and e-scooters offer individuals expanded access to jobs, grocery stores, health care, and other services. The electric nature of the device allows seniors and individuals with disabilities to use alternative transportation without requiring a high level of physical exertion.[xcviii] The use of electric-powered bikes and scooters does not nullify the health effects of active transport as the intensity level of the exercise is high enough to reduce the risk of serious health conditions.[xcix]

Figure 4-7: Bird Scooter Service Zone



Source: City of Rockford

In 2018, LimeBike provided the region with a dockless bike-sharing system, but the service did not continue beyond that year. The demand for a similar service was filled by Bird in 2021, and their service continues to this day. Bird offers a shared e-scooter service in downtown Rockford, enhancing mobility for the predominantly low-income residents of this area. The service requires an initial fee of $1, followed by a charge of 35 cents per minute of use.[c]

Safety

Driving a motor vehicle is an everyday activity for millions of Americans, but the risks associated with this mode of transport are often understated. In 2021, an estimated 42, 915 Americans died in motor vehicle crashes,[ci] establishing vehicle crashes as a leading cause of death. Mirroring national trends, the Rockford Region also has a high rate of crash fatalities and injuries.

From 2018 to 2022, the region had 32,153 total crashes, resulting in 11,436 injuries, 880 incapacitating injuries, and 190 fatalities. From 2018 to 2022, 82.5 percent of the total number of crashes within the region took place in urban areas with the remaining 17.5 percent of crashes occurred in rural areas. Crashes in urban areas accounted for 44.2 percent of non-intersection crashes while non-intersection crashes accounted for 70.2 percent of rural crashes.

Between this period, 690 crashes with severe outcomes[1] took place in urban areas. Over 100 of these crashes were coded as "fixed object and overturned vehicle" and did not take place at an intersection. Turning crashes at signalized intersections is second highest type of crash with severe outcomes that took place in an urban area, approximately 90 crashes from 2018 to 2022. In rural areas, 298 crashes occurred between 2018-2022. "Fixed object and overturned vehicle", non-intersection crashes were also the leading category of rural crashes, with 95 crashes.

Select behavioral factors heavily contribute to the rate of crashes that result in severe outcomes. The severity of crashes increases as the speed of motor vehicles involved in the crash increases. Reduced vehicle speed throughout the region may reduce instances of severe outcome crashes. Distracted driving is another leading cause of crashes. Enforcement of laws related to distracted driving an effective way of reducing crashes caused by distractions[cii], such as cell phones.

The threat posed by motor vehicles can cause people to avoid using alternative transportation modes for fear of being injured or killed. A pedestrian has a 95 percent chance of surviving being struck by a car if the car is traveling at 19 miles per hour or less, but the likelihood of survival drops to 10 percent when the car is traveling at 50 miles per hour.[ciii] From 2017 to 2022, 469 crashes involving a non-motorized roadway user took place in the region, resulting in 126 serious injuries and fatalities. Of these crashes, 161 involved a pedalcyclists, with 15.5 percent resulting in a severe outcome, while 308 crashes involved a pedestrian. The 308 pedestrian-involved crashes represent just one percent of all crashes in the region, but account for 20 percent of fatalities (36 fatalities) and 6 percent of incapacitating injuries.

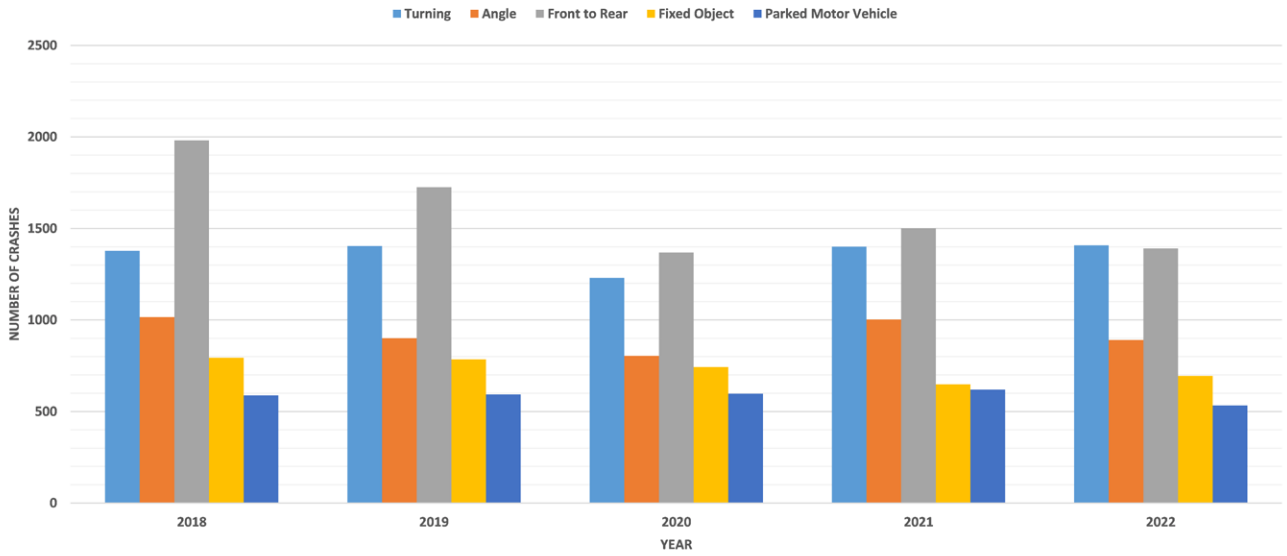
1 Severe outcomes are defined as the approximate combined number of fatalities and serious injuries resulting from crashes

Table 4-1: Regional Crash Totals 2018-2022

2018-2022 Crash Totals					
Rockford MPA	Total	Fatal	Injury	Total Killed	Total Injured
Totals	32,153	169	7,472	179	10,647

Source: Illinois Department of Transportation

Figure 4-8: Regional Crash Totals 2018-2022



Source: Illinois Department of Transportation

Pollution

The transportation sector is a significant contributor to pollution and emissions in the United States. In 2022, the transportation sector was responsible for 28 percent of GHG emissions in the U.S., the highest of any sector[civ]. Transportation also release many pollutants that can contaminate the region's air and water. Clean air and water is a cornerstone of a healthy community, and when these two natural elements become contaminated the community's health is at risk.

Air Quality

Air pollution and transportation are inextricably linked. The transportation sector is the leading contributor to air pollution and GHG emissions in the United States.[cv] Air quality is measured by several pollutants, such as particle pollution ($PM_{2.5}$ and PM_{10}), ozone (O_3), sulfur dioxide (SO_2), and nitrogen dioxide (NO_2). These pollutants can be classified as traffic-related air pollution (TRAP).[cvi]

Overexposure to TRAP can have significant negative health effects. Breathing in low levels of $PM_{2.5}$ can cause the size of a child's developing brain to alter. TRAP exposure also increases the risk of hypertension disorder in pregnant women; hypertension disorder is the leading cause of maternal and fetal illness and death.[cvii] Living near a busy road increases the risk of exposure to TRAP. Children who live near a busy road are more likely to develop asthma, while the elderly face an increased risk of CVD due to TRAP lowering "good cholesterol" levels.[cviii] Women who live near a busy road are also at higher risk of developing breast cancer.[cix]

Air quality is fundamentally linked to respiratory health. Poor air conditions can prove fatal for individuals with asthma and can also be a contributing factor in developing the condition. in 2021, 9.6 percent and 10.4 percent of adults aged over 18 have asthma in Boone and Winnebago County, respectively[cx]. Additionally, one out of every ten people are at risk of an asthma attack on days where the region exceeds healthy air quality standards.

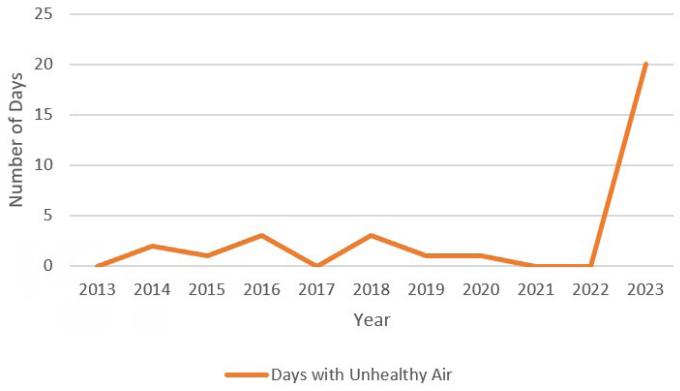
Residents living near industrial corridors are at higher risk for developing respiratory diseases, as these corridors tend to have poorer air quality readings than surrounding areas. These corridors see high levels of traffic and diesel emissions due to the high volume of trucks brought by the industrial centers. Reducing future emissions from trucks and other freight-related sources is critical to providing those who live

and work near these corridors with clean air. In Boone and Winnebago County, respectively, 4.7 percent and 2.1 percent of people live within 150 meters of a highway.[cxi]

Air pollution is measured throughout the region by the Illinois Environmental Protection Agency (IEPA). Monitoring stations are set up throughout the region to measure levels of particulate matter ($PM_{2.5}$) and ground-level ozone (O_3) against National Ambient Air Quality Standards (NAAQS). Between 2013 and 2022, there were 10 recorded exceedances of ground-level ozone standards and just one exceedance for $PM_{2.5}$. In 2023, there were 20 days where the region had unhealthy air. These days corresponded to the record number of wildfires in Western Canada during the summer of 2023. The region complies with ground-level ozone (O_3) averages, but this figure has risen by 4.8 percent since 2009, while the national average has decreased by 5.8 percent.

The CDC recommends mitigating traffic congestion and promoting active transportation and public transit to help improve air quality.[cxii] Retrofitting diesel engines and the development of electric vehicle (EV) infrastructure can also assist in this effort.

Figure 4-9: Days with Unhealthy Air in Boone & Winnebago County



Source: IEPA, EPA

Water Quality

Water quality can also be impacted by the transportation system. To keep the transportation system operating many products that can contaminate drinking water are used, such as road salt, oil and road tires. When a community's drinking water becomes contaminated, residents are at a higher risk of consuming dangerous chemicals. Exposure to high doses of specific chemicals can cause organ damage and negative reproductive effects.[cxiii] Chronic exposure can lead to higher cancer rates.[cxiv]

Leaking underground storage tanks (USTs) are one of the most common methods by which transportation impacts water quality. Commonly found underneath gas stations, the tanks contain gasoline and other petroleum products. Approximately 60 percent of all USTs in the U.S. experience at least one leak during their lifetime.[cxv] These leaks can have lasting effects on groundwater purity, leaving communities with contaminated drinking water. There are 686 recorded leaking USTs in the Rockford Region.

Additional, many brownfields in the Rockford Region once had transportation uses such as gas stations and rail yards. The sites sit vacant for many years allowing the chemicals left behind to seep into the groundwater beneath the site.[cxvi] Petroleum hydrocarbons (PHCs), polychlorinated biphenyls (PCBs), and chlorinated aliphatic hydrocarbons (CAHs) are common groundwater contaminants resulting from brownfields. Groundwater is the source of Boone and Winnebago Counties' drinking water supply, which may push the region to pursue decontamination programs to protect the quality of this supply. There are other ways PHCs can enter the water supply, such as through oil and other runoff from auto repair shops.

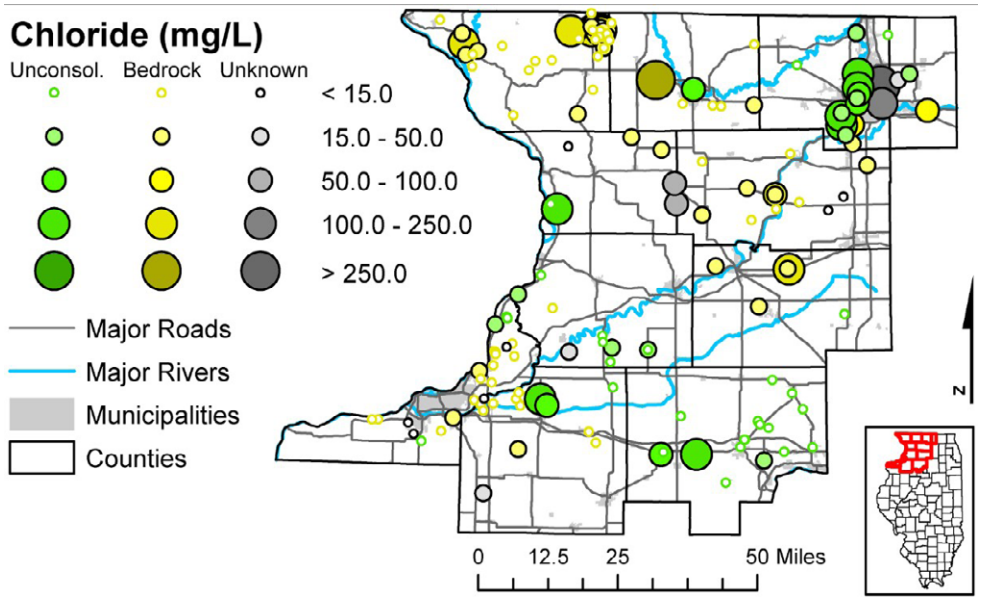
Road salt used to de-ice roads also has the ability to diminish the water quality of a region. Almost all road salt eventually ends up in the rivers, streams, and aquifers adjacent to the roads in is placed on.[cxvii] Road salt contains sodium chloride, which affects people with high blood pressure if unknowingly consumed in drinking water.[cxviii] Sodium chloride also can cause corrosion of pipes and water mains, which can release lead into the water supply. Chloride levels in the Rockford Region indicate that concerning amounts of road salt are making their way into the region's groundwater, with I-90/I-39 being a major contributor. It is important to note that road salt is not the sole cause of elevated chloride levels, as the agriculture industry also uses products that contribute to this contamination. Using road salt more conservatively or utilizing other traction assistance materials such as sand can help diminish this threat.

Brownfields

A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Source: Environmental Protection Agency

Figure 4-10: Chloride Map



Source: ISWS

Access to Resources

Maintaining acceptable public health standards in a community necessitates making certain resources universally available. Access to healthcare services is a prime example of a resource integral to public health. Residents in the region who lack access to healthcare facilities and pharmacies may struggle to receive care, consequently placing them at risk for a variety of adverse health outcomes. As will be the case with the majority of resources discussed in this section, low-income and minority neighborhoods have a higher likelihood of a lack of reasonable access to healthcare services. This trend is reflected in the Rockford Region, such as when the Rockton Avenue location of Mercy Health closed 70 inpatient beds and moved them to Javon Bea Hospital, east of I-90.

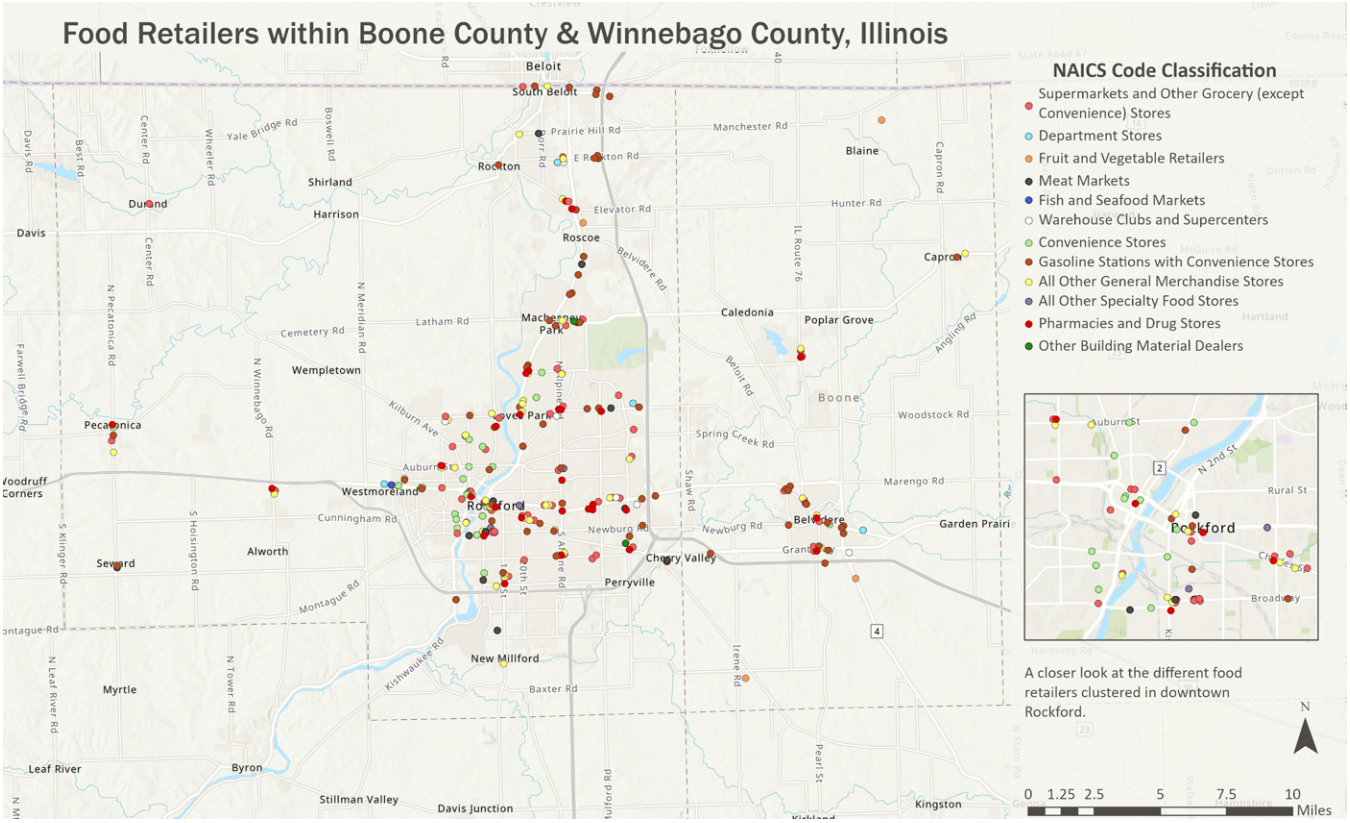
A neighborhood that has limited access to grocery stores and markets that carry affordable and nutritious food is called a food desert. Residents of food deserts are at increased risk of developing chronic diet-related diseases, as well as higher rates of obesity.[cxix] Children living in food deserts are at risk for obesity, developmental issues, and negative mental health effects[cxx] which could increase due to type of food consumed. Many low-income neighborhoods, where food deserts most frequently occur, lack the ability to consume sufficient levels of fruits, vegetables, whole grains, and healthy fats. Consumption of these foods promotes healthy levels of weight and reduces the risk of CVD and some forms of cancer.[cxxi] Residents of neighborhoods within food deserts have few options outside of overpriced convenience stores, fast food, and long trips to expensive grocery stores.

While much of the Rockford Region is within one mile of a supermarket which offers access to healthy and affordable food, some areas lack this proximity. The census tracts just to the south of US-20, including the Rockford Airport and New Milford, are classified as food deserts by the USDA definition as is the rest of the region south of this area. This area is more rural in nature and is not as densely populated. Portions of northeastern Rockford also do not have food retailers located within walking distance, but this area has higher levels of household vehicle ownership.

Access to open spaces, parks, and other natural resources is shown to have beneficial health effects. Several studies state that living near a park or green space reduces mortality.[cxxii] Other studies show living near an urban park decreases the risk of CVD and lowers heart rate variability (HRV).[cxxiii] An individual's mood, attentional capacity, and general mental health are also likely to improve if they have access to and spend time in parks and open spaces.[cxxiv] The Rockford Region features a wealth of parks along its community riverfronts, augmented by more parks and paths scattered across the area. Yet, in some southern Rockford neighborhoods, 15 to 45 percent of residents live more than a half mile from the nearest park.[cxxv]

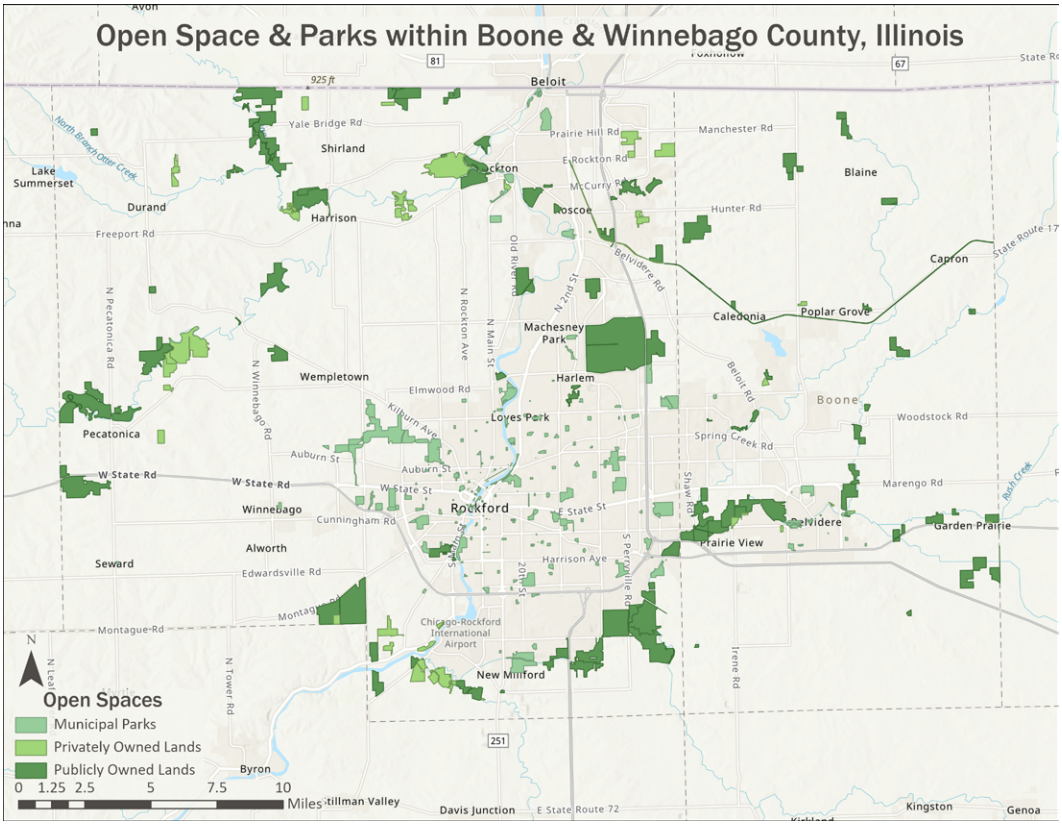
Parks and open spaces help to facilitate physical activity, as do gyms and fitness centers. Physical exercise helps to decrease the risk of heart disease, obesity, high blood pressure, high cholesterol, and type II diabetes.[cxxvi] Without easy access to fitness centers, community members may not be able to meet their exercise needs. The west side of Rockford contains no private fitness centers, with the YMCA on Y Boulevard being the closest option.

Figure 4-11: Food Access Map



Source: WinGIS

Figure 4-12: Open Space and Parks



Source: WinGIS

PART 5:

Guiding Principles & Recommendations

Guiding principles are statements that create a framework for decision-making. In transportation planning, guiding principles can help ensure that planning process and documents are consistent and aligned with a Metropolitan Planning Organization's (MPO) mission and goals. Establishing guiding principles for the Health and Transportation Study was an important step its planning process for two reasons. First, the guiding principles helped frame the direction of the study, including the recommendations later in their report. Second, the guiding principles initiated a regional conversation around the relationship between health and transportation.

Based on these conversations, the following guiding principles were established for this report. While developed specifically for the Health and Transportation Study, the guiding principles will be incorporated through the MPO's suite of plans and studies, including the next Metropolitan Transportation Plan update.

- Principle #1: Active Lifestyles
- Principle #2: Healthy & Sustainable Environment
- Principle #3: Safety
- Principle #4: Choices & Access for All
- Principle #5: Equity

Range of Recommendations

With the guiding principles established, a range of recommendations was developed. These recommendations are aimed at improving the health outcomes of all individuals in the region through transportation-related decisions and investments. The range of recommendations take into account various aspects needed to address the study finding, including the regional context, social determinants of health, transportation, and the built environment.

Recommendations are suggested actions to address a problem or opportunity identified in the study, providing a real-world application.

Recommendations presented below are grouped into the five guiding principles established at the beginning of the planning process. Since the recommendations build off of the guiding principles, a brief background for each guiding principle is provided. These recommendations are based on local and national best practices, as well as the region's current needs and future opportunities and input from stakeholders. It is important to note that some of the recommendations encompass elements beyond the transportation system that may influence or be influenced by transportation decisions and investments, including land use, development, environment, equity and quality of life.

Each of the recommendation is detailed below within the following elements:

- **Social Determinant(s) of Health Addressed:** Lists the social determinants of health that aligns with, supports, or is supported by the recommendation.
- **Potential Partners:** Identifies organizations that may be best suited to assist in the successful implementation of the recommendation.
- **Related Principles:** Lists the other principles within the study that aligns with, supports, or is supported by that recommendation.

Principle #1. Active Lifestyles

According to the United States Department of Transportation, almost a quarter of adults do not engage in any physical activity outside of their jobs. Sedentary lifestyles are an important reason why two-thirds of U.S. adults are overweight or obese. Transit, bicycle, and pedestrian facilities not only create opportunities for people to exercise and reduce obesity but also reduce the risk of associated conditions, such as diabetes, cardiovascular disease, and premature death.[cxxvii]

Recommendations #1. Address sidewalk, shared use paths, and bicycle network gaps that impact connectivity.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment; Education Access & Quality; Health Care Access & Quality
- **Potential Partners:** Illinois Department of Transportation (IDOT); local governments
- **Related Principles:** Healthy and Sustainable Environment; Choice and Access for All

Recommendations #2. Encourage and support local governments to adopt local complete streets policies and practices.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment
- **Potential Partners:** Local governments; developers
- **Related Principles:** Health and Sustainable Environment; Choice and Access for All; Equity.

Recommendations #3. Incentivize mixed-use and transit-oriented development.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment
- **Potential Partners:** Local governments; developers
- **Related Principles:** Healthy and Sustainable Environment; Choice and Access for All; Equity

Recommendation #4. Create non-motorized access and safe routes to open and recreational spaces.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment
- **Potential Partners:** Local governments; park districts
- **Related Principles:** Healthy and Sustainable Environment; Choice and Access for All; Safety; Equity

Principle #2 Healthy & Sustainable Environment

Over the past several decades, there has been a growing awareness of the need to have better an understanding of the relationship between transportation, the environment, and health. Transportation-related air pollutants are one of the largest contributors to unhealthy air quality. Exposure to these pollutants is linked to many adverse health effects, including premature death, cardiac symptoms, and the exacerbation of asthma symptoms.[cxxviii] A number of diverse strategies can help reduce transportation-related pollutants and related adverse health impacts.

Recommendation #5. Increase access to parks and green space to provide participation opportunities in recreational and leisure activities.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment; Social & Community Context
- **Potential Partners:** Local governments; park districts; conservation districts; non-profits
- **Related Principles:** Active Lifestyles

Recommendation #6. Reduce exposure to transportation-related air pollution.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment
- **Potential Partners:** Local governments
- **Related Principles:** Equity

Recommendation #7. Encourage comfort focused infrastructure, such as shade trees, transit shelters, and other extreme weather exposure interventions.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment
- **Potential Partners:** Local governments
- **Related Principles:** Active Lifestyles; Equity

Recommendation #8. Improve physical access to health care services, mental health providers, and dental care.

- **Social Determinant(s) of Health Addressed:** Health Care Access & Quality
- **Potential Partners:** Transit providers, human service transportation providers; health care providers
- **Related Principles** Active Lifestyles; Choices & Access for All

Principle #3. Safety

In the United States, motor vehicle crashes are a leading cause of death. In 2021, 42,939 people lost their lives on roadways across the nation. For perspective, the number of people that could fill the average baseball stadium.[cxxix] Motor vehicle crash injuries and deaths are preventable.

Transportation agencies can reduce injuries and deaths associated with transportation system by designing safer streets, promoting safe behavior, and improving access to desired destinations.

Recommendation #9. Complete Bus Stop Accessibility and Safety Assessment at locations with highest boardings and alightings.

- **Social Determinant(s) of Health Addressed:** Economic Stability; Education Access & Quality; Health Care Access & Quality; Neighborhood & Built Environment
- **Potential Partners:** Transit providers
- **Related Principles:** Active Lifestyles; Choices & Access for All; Equity

Recommendation #10. Conduct Road Safety Audits on priority corridors and implement recommendations.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment
- **Potential Partners:** Local governments
- **Related Principles:** Active Lifestyles; Choices & Access for All; Equity

Recommendation #11. Enhance crosswalk visibility through improved signage and pavement markings.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment
- **Potential Partners:** Local governments
- **Related Principles:** Active Lifestyles; Choices & Access for All; Equity

Recommendation #12. Construct separated bicycle facilities and shared use paths, where feasible.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment
- **Potential Partners:** Local governments
- **Related Principles:** Active Lifestyles; Healthy & Sustainable Environment; Choices & Access for All; Equity

Recommendation #13. Install street lighting to improve visibility of intersections and pedestrians.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment
- **Potential Partners:** Local governments
- **Related Principles:** Active Lifestyles; Choices & Access for All; Equity

Recommendation #14. Install traffic calming strategies, where appropriate.

- **Social Determinant(s) of Health Addressed:** Neighborhood & Built Environment
- **Potential Partners:** Local governments
- **Related Principles:** Active Lifestyles; Choices & Access for All; Equity

Principle #4. Choices & Access for All

Everyone in the region should be able to affirmatively answer the question, "Can I get where I want to go easily and safely in whatever way I choose."[cxxx] The presence and quality of bicycle and pedestrian infrastructure, bus routes, and street design influence connectivity and accessibility to everyday destinations, such as grocery stores, schools, parks, and doctors' offices. Investing in a diverse transportation network ensures everyone has access to safe and viable transportation options and users of varying levels of experience, ages, and abilities can reliably reach their destinations.[cxxxi]

Recommendation #14. Improve physical access to primary health care services and routine preventive care, including mental health and dental care services.

- **Social Determinant(s) of Health Addressed:** Health Care Access & Quality
- **Potential Partners:** Public transit providers, human service transportation providers, non-profits
- **Related Principles:** Active Lifestyles; Equity

Recommendation #15. Collaborate with organizations providing mobile health services.

- **Social Determinant(s) of Health Addressed:** Health Care Access & Quality
- **Potential Partners:** Public health departments, medical service providers
- **Related Principles:** Equity

Recommendation #16. Support ridesharing programs that connect people to jobs and

essential services.

- **Social Determinant(s) of Health Addressed:** Economic Stability; Education Access & Quality; Health Care Access & Quality
- **Potential Partners:** Transit providers, transportation network companies
- **Related Principles:** Equity

Recommendation #17. Prioritize roadway and alternative transportation projects that close first- and last-mile gaps to public transit.

- **Social Determinant(s) of Health Addressed:** Economic Stability; Education Access & Quality; Health Care Access & Quality; Neighborhood & Built Environment
- **Potential Partners:** Local governments, public transit providers
- **Related Principles:** Active Lifestyles; Healthy & Sustainable Environment; Equity

Recommendation #18. Conduct a public awareness campaign to improve the perception of mass transit.

- **Social Determinant(s) of Health Addressed:** Economic Stability; Education Access & Quality; Health Care Access & Quality
- **Potential Partners:** Public transit providers, local government, media outlets
- **Related Principles:** Active Lifestyles, Healthy & Sustainable Environment, Equity

Recommendation #19. Promote rural public transportation services.

- **Social Determinant(s) of Health Addressed:** Economic Stability; Education Access & Quality; Health Care Access & Quality
- **Potential Partners:** Public transit providers, local governments, media outlets
- **Related Principles:** Equity

Recommendation #20. Increase public transit options for healthy food access.

- **Social Determinant(s) of Health Addressed:** Economic Stability; Education Access & Quality; Health Care Access & Quality
- **Potential Partners:** Local governments, public transit providers
- **Related Principles:** Equity

Principle #5. Equity

Adverse health effects related to the transportation system tends to disproportionally impact vulnerable members of the region, such as low-income individuals, minorities, children, persons with disability, and older adults. Many of the strategies associated with the principles above, such as increasing active transportation and improving connectivity, can also improve equity if they are targeted in low-income and minority communities.

Recommendation #21. Conduct a Regional Transportation Equity Audit across all MPO planning documents and programming practices.

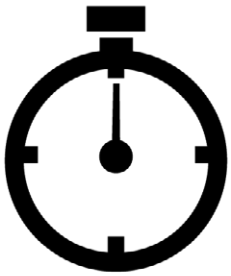
- **Social Determinant(s) of Health Addressed:** Economic Stability; Education Access & Quality; Health Care Access & Quality; Neighborhoods & Built Environment
- **Potential Partners:** Nonprofits, community organizations
- **Related Principles:** Choices & Access for All

Recommendation #22. Increase outreach efforts to underserved area during the transportation planning and programming process.

- **Social Determinant(s) of Health Addressed:** Economic Stability; Education Access & Quality; Health Care Access & Quality; Neighborhoods & Built Environment
- **Potential Partners:** Local governments, public transit providers, nonprofits, community organizations
- **Related Principles:** Active Lifestyles; Safety; Choices & Access for All

Recommendation #23. Consider all ages and abilities in the design and operation of the active transportation system.

- **Social Determinant(s) of Health Addressed:** Economic Stability; Education Access & Quality; Health Care Access & Quality; Neighborhoods & Built Environment
- **Potential Partners:** Local governments
- **Related Principles:** Active Lifestyles; Safety; Choices & Access for All



PART 6:

Looking Forward

Successful implementation of the Health and Transportation Study requires strategic coordination and planning. Health considerations should be integrated into the transportation planning process and investment decisions through coordination with health and transportation agencies at a regional, local, and state level. All possible funding strategies should be considered when attempting to implement the recommendations of this study, including grant opportunities and public-private partnerships.

Steps to Implementation

The implementation strategies outlined below will guide the integration of health considerations into the region's transportation planning and programming processes. They provide a framework for incorporating health more effectively into transportation strategies and regional policies.

Planning

The Metropolitan Planning Organization (MPO) coordinates a comprehensive transportation planning process and supports a consistent, multi-modal transportation network across the entire region, which can enhance community health. While the MPO is not an implementing agency and cannot provide upgrades to physical infrastructure, it provides support and input to local jurisdictions and agencies who have the ability to implement the recommendations outlined in this plan.

The MPO can incorporate health considerations into the planning process by integrating health into all MPO documents in order to promote healthy communities and accessible health care across the region. Additionally, the MPO can re-evaluate this Health and Transportation Study to track progress within the identified strategies and actions over the next several years.

Programming

The MPO has a primary role in fostering communication, coordination, and education within the region. Implementation steps related to programming are actions the MPO can most directly influence. Regional collaboration and coordination among various organizations, non-profits, community advocacy groups, and residents are essential for overseeing the study's recommendations. This collaboration helps identify transportation-related health needs, resources, and priorities. The MPO will ensure that health organizations are included within various Region 1 Planning Council (R1) committees and stakeholder groups in an effort to further collaboration. Additionally, their inclusion will help to identify health benefits, concerns, and solutions.

Education is vital for creating a community aware of how everyday decisions affect their own health and that of others. Partnering with local organizations to enhance educational opportunities can further improve understanding of health and transportation options throughout the region.

Beyond collaboration and educational initiatives, data is crucial in providing insights on key issues such as access to healthcare and healthy food options. In order to increase availability, accessibility, and identification of healthful foods in communities, the region should regularly update a food access map.

Policy

While not directly altering the physical footprint or existing infrastructure of the transportation system, policies and practices adopted by partner agencies can have a large impact on priorities and the role health plays in the region's planning processes.

Conclusion

Planning the integration of accessible transportation and healthy approaches is important in enhancing accessibility and mobility of the current transportation system. This study delves into the link between health and transportation, assesses regional context and transportation infrastructure, and captures community values. Recommendations in the plan are drawn from feedback gathered through community surveys and engagement with the Community Advisory Forum (CAF).

Based on community and stakeholder input, this study identifies key implementation strategies for developing a transportation system that fosters a healthy community. Implementation strategies include collaboration among the public and private sectors and incorporating public engagement to gather support for implementation. Sustained coordination among stakeholders is essential to identify long-term solutions that will enhance community health and healthcare access across the region.

This study may be used as a reference guide for both health and transportation decision makers to identify regional health challenges, document a baseline for health-related indicators, and highlight current connections between transportation and health.

Appendices

Appendix A: Acronyms and Glossary

Acronyms & Abbreviations

A

ACS: American Community Survey

ADA: Americans with Disabilities Act

API: Application Programming Interface

B

BCT: Boone County Transit

BIL: Bipartisan Infrastructure Law

BMP: Beneficiary Mitigation Plan

C

CAB: Community Asset Builders

CAF: Community Advisory Forum

CAH: Chlorinated Aliphatic Hydrocarbons

CDC: Centers for Disease Control and Prevention

CFI: Charging and Fueling Infrastructure

CHIP: Community Health Improvement Plans

CO: Carbon Monoxide

CO2: Carbon Dioxide

CRP: Carbon Reduction Program

CVD: Cardiovascular Disease

D

DBFOM: Design, Build, Finance, Operate, and Maintain

DOT: Department of Transportation

E

EPA: Environmental Protection Agency

F

FHWA: Federal Highway Administration

FTA: Federal Transit Administration

G

GHG: Greenhouse Gas

H

HHS: U.S. Department of Health and Human Services

HIPPA: Health Insurance Portability and Accountability Act

HRV: Heart Rate Variability

HSTP: Human Service Transportation Plan

I

ICAM: Innovative Coordinated Access and Mobility

IDOT: Illinois Department of Transportation

IDPH: Illinois Department of Public Health

IPLAN: Illinois Plan for Local Area Needs

IRS: Internal Revenue Service

ISC: Illinois State Climatologist

L

LOTS: Lee-Ogle Transportation System

LRTP: Long Range Transportation Plan

M

MPA: Metropolitan Planning Area

MPO: Metropolitan Planning Organization

MRHA: Missouri Rural Health Association

MSA: Metropolitan Statistical Area

N

NAE: Neighborhood Access and Equity

NEMT: Non-emergency Medical Transportation

NO2: Nitrogen Dioxide

NOx: Nitrogen Oxide

O

O3: Ozone

ODPHP: Office of Disease Prevention and Health Promotion

P

P3: Public Private Partnerships

Pb: Lead

PCB: Polychlorinated Biphenyls

PHC: Petroleum Hydrocarbons

PM: Particulate Matter

R

R1: Region 1 Planning Council

RAISE: Rebuilding American Infrastructure with Sustainability and Equity

RCN: Reconnecting Communities and Neighborhoods

RCP: Reconnecting Communities Pilot Program

RMTD: Rockford Mass Transit District

RRHC: Rockford Regional Health Council

S

SDOH: Social Determinants of Health

SMI: Serious Mental Illness

SMTD: Stateline Mass Transit District

SNAP: Supplemental Nutrition Assistance Program

SO2: Sulfur Dioxide

SRA: Strategic Regional Arterials

STIP: Statewide Transportation Improvement Program

T

TIP: Transportation Improvement Program

TNC: Transpiration Network Companies

TRAP: Traffic-Related Air Pollution

U

UD: Universal Design

UHI: Urban Heat Islands

USDOT: U.S. Department of Transportation

USDA: U.S. Department of Agriculture

UST: Underground Storage Tanks

V

VW: Volkswagen AG

W

WCCMHB: Winnebago County Community Mental Health Board

WCHD: Winnebago County Health Department

Glossary of Terms

A

Accessibility: The ease of reaching valued destinations, such as jobs, shops, schools, entertainment, and recreation.

Source: Federal Highway Administration

Aging in Place: The ability to stay in your own home as you get older and be able to maintain independence with help from family, friends, and community services.

Source: National Institute on Aging

Alternative Transportation: Any mode of personal transportation other than a single-occupant vehicle, including biking, walking, carpooling, and public transportation.

Source: Region 1 Planning Council

Americans with Disabilities Act: A federal civil rights law that prohibits discrimination against people with disabilities in everyday activities. Common activities covered by the ADA include employment, state and local government services, public transit, businesses that are open to the public, and telecommunications.

Source: U.S. Department of Justice Civil Rights Edition

Attainment Areas: An area that meets or is better than the National Ambient Air Quality Standards.

Source: Environmental Protection Agency

B

Bike Lanes: A portion of roadway designated for preferential or exclusive use by bicyclists by pavement markings and, if used, signs.

Source: National Association of City Transportation Officials

Bike Sharing: Short-term bike rental, usually for individual periods of an hour or less.

Source: Transportation Research Board

Brownfields: A brownfield is a property, the expansion, redevelopment, or reuse of which may be complicated by the presence or potential presence of a hazardous substance, pollutant, or contaminant.

Source: Environmental Protection Agency

C

Carpooling: A formal or informal arrangement where commuters share a vehicle for trips from either a common origin, destination, or both, reducing the number of vehicles on the road.

Source: U.S. Department of Transportation

Clean Air Act: The law that defines the U.S. EPA's responsibilities for protecting and improving the nation's air quality and stratospheric ozone layer.

Source: U.S. Environmental Protection Agency

Complete Streets: A transportation policy and design approach that requires streets to be planned, designed, and maintained to enable safe, convenient, and comfortable travel for all modes of travel. At the core of the complete streets philosophy is the idea that pedestrians, bicyclists, motorists, and public transportation users of all ages and abilities are able to safely move along and across a street.

Source: U.S. Department of Transportation

Cooling Shelter: A location, typically an air-conditioned or cooled building that has been designated as a site to provide respite and safety during extreme heat.

Source: Center for Disease Control

D

Demand Response: Demand response is any non-fixed route system of transporting individuals that necessitates advanced scheduling by the passenger. Services can be provided by public entities, nonprofits, and private providers.

Source: Federal Highway Administration

E

Electric Vehicle (EV): A vehicle that has an electric motor instead of an internal combustion engine.

Source: U.S. Department of Energy

Emissions: Harmful, polluting gases that affect the Earth's atmosphere.

Source: U.S. Environmental Protection Agency

Ethnicity: The Census adheres to the U.S. Office of Management and Budget's (OMB) definition of ethnicity. There are two minimum categories for ethnicity: Hispanic or Latino and Not Hispanic or Latino.

Source: U.S. Census Bureau

F

Fixed Route Public Transportation: Services provided on a repetitive, fixed schedule basis along a specific route

with vehicles stopping to pick up and deliver passengers to specific locations; each fixed route trip serves the same origins and destinations.

Source: Federal Transit Administration

G

Green House Gas: Gases that trap heat in the upper atmosphere are defined as greenhouse gases (e.g. Carbon Dioxide, Methane, Nitrous Oxide, and Fluorinated Gases).

Source: U.S. Environmental Protection Agency

H

Human Services Transportation Plan (HSTP): Locally developed transportation plans that identifies the needs of individuals with disabilities, older adults, and people with low incomes, provide strategies for meeting these needs, and prioritize transportation services for funding and implementation. These plans must involve representatives of public, private, and non-profit transportation and human services providers, as well as members of the public.

Source: Federal Transit Administration

L

Livability: A livable community provides more transportation choices that are safe, reliable, and economical, promotes equitable, affordable housing options, enhance economic competitiveness, supports and targets funding toward existing communities, and values communities and neighborhoods.

Source: Federal Highway Administration

M

Median Household Income: The income level earned by a given household where half of the households earn more and half earn less.

Source: U.S. Census Bureau

Metropolitan Planning Area (MPA): The geographic area in which the metropolitan transportation planning process required by 23 U.S.C. 134 and section 8 of the Federal Transit Act (49 U.S.C. app. 1607) must be carried out.

Source: Federal Highway Administration

Metropolitan Planning Organization (MPO): A regional policy body required in urbanized areas with populations over 50,000 and designated by local officials and the governor of the state to carry out the metropolitan transportation requirements of federal highway and transit legislation.

Source: Federal Highway Administration

Metropolitan Statistical Area (MSA): The county or counties (or equivalent entities) associated with at least one urbanized area with a population of at least 50,000, plus adjacent counties having a high degree of social and economic integration with the core as measured through commuting ties.

Source: U.S. Census Bureau

Micro-mobility: Shared-use fleets of small, fully or partially human-powered vehicles such as bikes, e-bikes, and e-scooters. These vehicles are generally rented through a mobile app or kiosk, are picked up and dropped off in the public right-of-way, and are meant for short point-to-point trips.

Source: National Association of City Transportation Officials (NACTO)

Multimodal: The availability of transportation options using different modes within a system or corridor.

Source: Federal Highway Administration

N

National Ambient Air Quality Standards: Regulations establishing national standards for six principal pollutants (including Carbon Monoxide (CO); Lead (Pb); Nitrogen Dioxide (NO2); Ozone (O3); Particle Pollution (PM); and Sulfur Dioxide (SO2)).

Source: U.S. Environmental Protection Agency

Nonattainment Area: Any geographic area that has not met the requirements for clean air as set out in the Clean Air Act of 1990.

Source: Federal Highway Administration

P

Performance Measures: Indicators of how well the transportation system is performing with regard to such things as average speed, reliability of travel, and accident rates. Used as feedback in the decision-making process.

Source: Federal Highway Administration

PM1: Performance measure that focuses on safety by assessing fatalities and serious injuries. The performance measure supports Highway Safety Improvement Program with the goal of significantly reducing traffic fatalities and serious injuries on all public roads.

Source: Federal Highway Administration

PM2: Assessing Pavement Condition for the National Highway Performance Program and Bridge Condition for the National Highway Performance Program.

Source: Federal Register

PM3: Assessing Performance of the National Highway System, Freight Movement on the Interstate System, and Congestion Mitigation and Air Quality Improvement Program.

Source: Federal Register

Public-Private Partnership (P3): Contractual agreements between a public agency and a private entity that allow for greater private participation in the delivery of projects.

Source: U.S. Department of Transportation

R

Race: A person's self-identification with one or more social groups.

Source: U.S. Census Bureau

Region 1 Planning Council (R1): A special-purpose, regional government agency providing cross-jurisdictional, government- to-government collaborative planning across Northern Illinois.

Source: Region 1 Planning Council

Ridesharing: A formal or informal arrangement where commuters share a vehicle for trips from a common origin, destination, or both.

Source: Federal Highway Administration

S

Serious Mental Illness (SMI): SMI is defined as someone over the age of 18 who has (or had within the past year) a diagnosable mental, behavioral, or emotional disorder that causes serious functional impairment that substantially interferes with or limits one or more major life activities.

Source: SMI Adviser

Shared Use Mobility: Transportation services that are shared among users, including public transit, taxis and limos, bike sharing, carsharing (round-trip, one-way, and personal vehicle sharing), ridesharing (carpooling, van-pooling), ride sourcing, scooter sharing, shuttle services, neighborhood jitneys, and commercial delivery vehicles providing flexible goods movement.

Source: Federal Highway Administration

Shared Use Path: A bikeway physically separated from motor vehicle traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way.

Source: National Association of City Transportation Officials (NACTO)

Social Determinants of Health (SDOH): The non-medical factors which can influence one's health outcomes. They are conditions in which people are born, grow, work, live, and age in that shape the conditions of daily life.

Source: World Health Organization

Stakeholders: Individuals and organizations involved in or affected by the transportation planning process. Include federal/ state/local officials, MPOs, transit operators, freight companies, shippers, and the general public.

Source: Federal Highway Administration

U

Universal Design: The design and composition of an environment so that it can be accessed, understood, and used to the greatest extent possible by all people regardless of their age, size, ability or disability.

Source: Center for Excellence in Universal Design

Urban Heat Islands: Urbanized areas that experience higher temperatures than outlying areas. Structures such as buildings, roads, and other infrastructure absorb and re-emit the sun's heat more than natural landscapes such as forests and water bodies. Urban areas, where these structures are highly concentrated and greenery is limited, become "islands" of higher temperatures relative to outlying areas.

Source: Environmental Protection Agency

Appendix B: Stakeholder & Public Engagement

Stakeholder and public engagement is an important aspect of the transportation planning process. Numerous rounds of stakeholder engagement took place to support this study's development. It was especially important to connect with both the recipients and providers of healthcare in the Rockford Region. Over the course of 12 months, two surveys were conducted by Region 1 Planning Council (R1) that feed into the Health and Transportation Study:

Health Provider Survey. In September 2023, R1, in partnership with the RRHC, surveyed a number of health departments, health and healthcare foundations, health-related nonprofits, private and public healthcare providers, advocacy groups, and providers. The purpose of this survey was to gather provider knowledge regarding how their patients get to and from services. Additionally, respondents provided information about transportation services they provide to their clients and whether the COVID-19 pandemic disrupted these services.

Health and Transportation Public Survey. From December 2023 through February of 2024, a health and transportation public survey was released to better understand how individuals access medical care and transportation barriers they face doing so. The survey was placed within the waiting rooms of various medical facilities throughout the region. Additionally, a number of pop-ups were held at local healthcare provider offices to speak directly with patients about their transportation challenges.

Responses to the surveys helped paint a picture of the state of healthcare in the region, in particular its relationship to transportation. Public engagement efforts are provided in more detail below.

Health Provider Survey

The following section provides insight into the relationship between transportation and existing healthcare providers in the region. In order to acquire information regarding transportation services to the region's healthcare providers, Region 1 Planning Council (R1), with the assistance of the Rockford Region Health Council (RRHC), distributed a survey to healthcare providers throughout Boone and Winnebago County. The results of the survey are discussed in this appendix and illustrate the strengths and weaknesses of the region's healthcare transportation services.

In total, 46 survey responses were received, with 31 complete responses and 15 partially complete responses. Twenty-five healthcare providers from the region completed the survey. Several healthcare providers submitted multiple surveys with the contributions from members of different departments of their agency.

The providers encompass a diverse range of provider types, including 11 mental health programs and six advocacy groups. Additionally, five hospitals, four health non-profits, and three federally qualified health centers provided feedback. Contributions also came from a variety of other social service providers including domestic violence agencies, social services, and a homeless shelter.

Table B-1: Members of Rockford Regional Health Council Members (RRHC)

Rockford Regional Health Council Members
University of Illinois College of Medicine Rockford
Mercyhealth
Rockford Fire Department
UW Health SwedishAmerican
Winnebago County
Winnebago County Medical Society
Rosecrance Health Network
Seventeeth Judicial Circuit
City of Rockford
Winnebago County Health Department
Rock Valley College
Rockford Acromatic Products
YMCA of Rock River Valley
YMCA La Voz Latina
Rockford Park District
Boys and Girls Club Rockford
Rockford Public School District 205
Mile Square Health Center
Illinois Bank and Trust
Crusader Community Health
Winnebago County Dental Society

General Questions

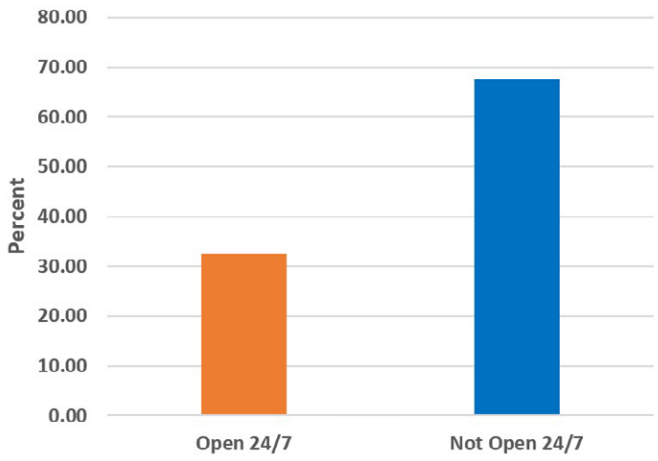
Timing of Care

The initial questions on the survey asked respondents to provide information on their agency's hours of operations. Provider business hours are particularly important to children and older patients dependent on external sources for transport. Most providers surveyed that are not open 24 hours a day seven days a week, operate from 8:00 AM to 5:00 PM, Monday through Friday. Since these hours coincide with typical business hours for most workplaces, patients who rely on transportation from a personal contact will likely need that contact to take time off work.

An additional factor affecting the timing of care is the requirement or non-requirement of an appointment. Over thirty-eight percent of the surveyed require appointments. Appointments allow providers to efficiently provide care and maximize the number of serviced patients, but also require a strict arrival time for patients. Patients who can drive a personal vehicle to their appointments may be relatively unaffected by this time constraint, but those depending on public transit, a ride from a family member or friend, or the providers own transportation service often are.

Figure B-1 shows what share of responding agencies are open 24/7.

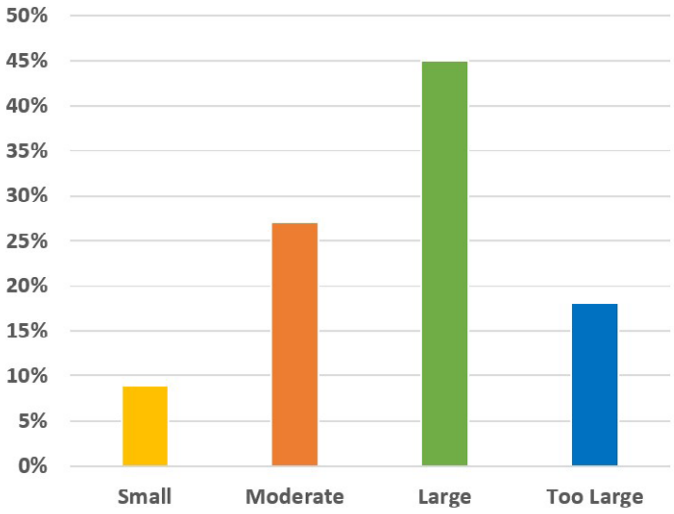
Figure B-1: Open 24/7



Locations of Care

All of the providers surveyed have locations in Boone and Winnebago Counties, with 47.5 percent of respondents having more than one location in the two-county region. The majority of surveyed providers who have multiple locations had five or more total locations. Providers were also asked to describe the service area of their transportation service. Forty-five percent of providers described their service area as large, while another 18.2 percent stated their service area is "too large".

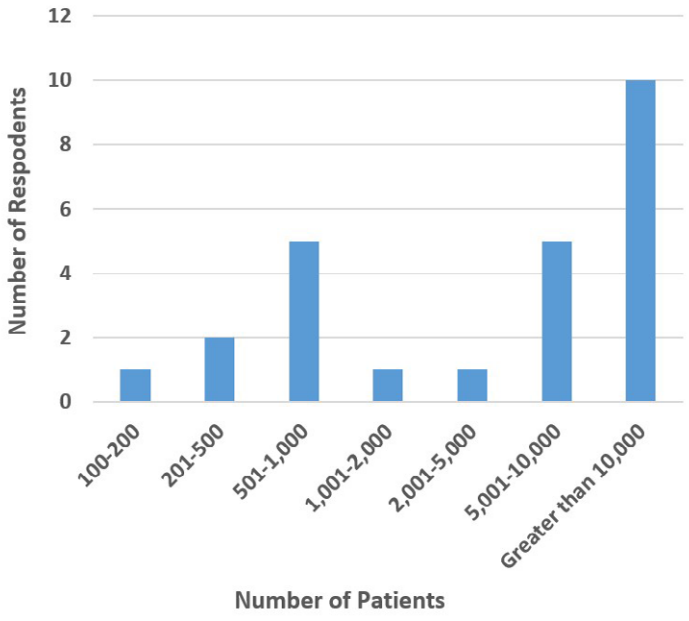
Figure B-2: Size of Service Area



Patients Served

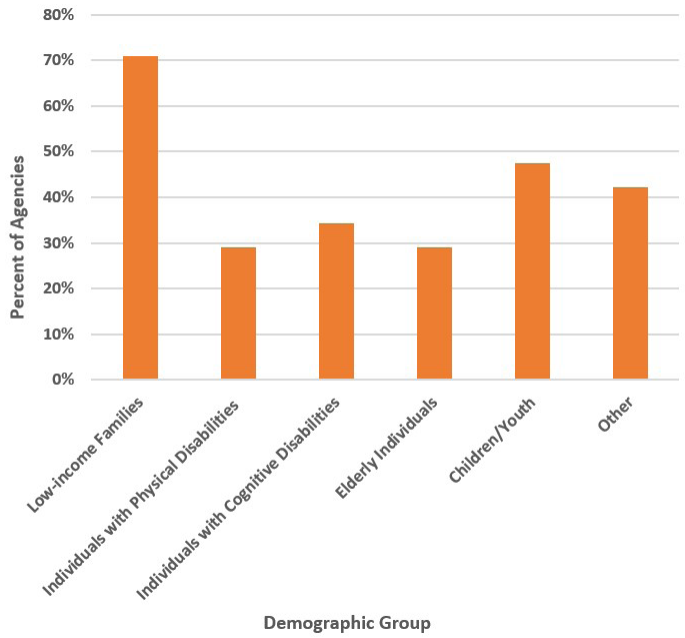
The providers serve a wide range of patients at differing volumes. Figure B-3 shows the number of patients each of the organizations serve each year.

Figure B-3: Number of Patients Served Annually



Many providers surveyed provide specialized services for select demographic groups of patients. Figure B-4 shows which demographic groups are provided with specialized services from responding local health agencies.

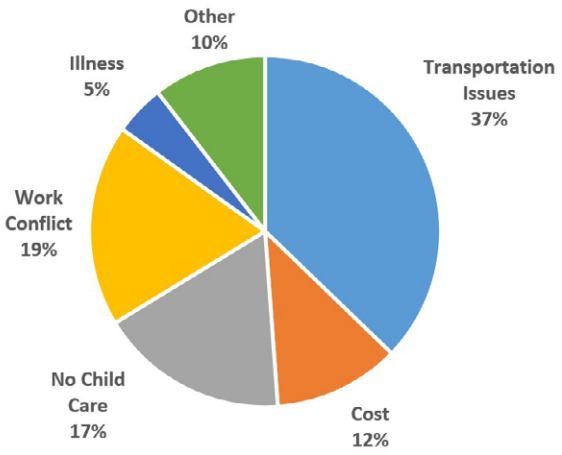
Figure B-4: Percent of Responding Agencies Providing Specialized Services by Demographic



Client Transportation

The results of the health provider survey emphasize the important role transportation plays in health care. As a part of the survey, providers were asked to identify the most common reasons patients canceled or had to reschedule an appointment; transportation issues were ranked first. The most common reasons for appointment cancellations are shown in Figure B-5.

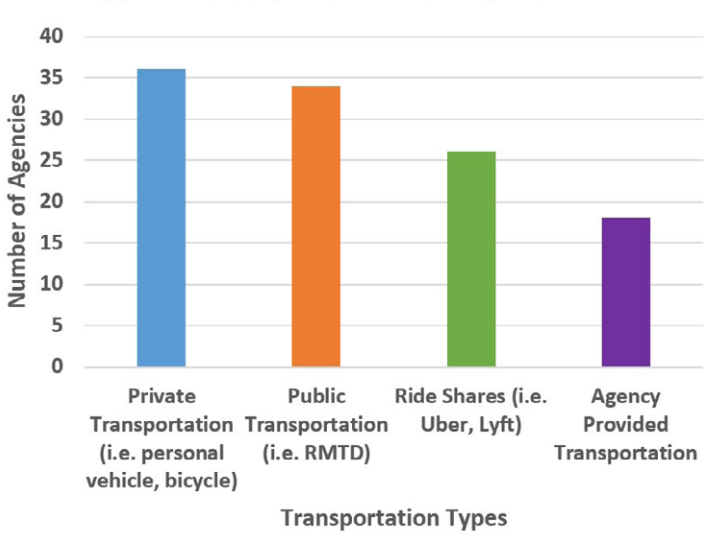
Figure B-5: Most Common Reasons for Appointment Cancellations



Responding providers were also asked to indicate the types of transportation used by their clientele to travel to appointments. Figure B-6 displayed displays the types of transportation used by clients. More information regarding provider transportation services can be found in Provider Transportation.

Although health providers in the region consider transportation services essential for providing access to all care seekers, the varying levels of demand for these services can limit their effectiveness. Only 9.1 percent of providers reported that passenger demand poses no constraint on their transportation services. Conversely, 36.4 percent stated that passenger demand provides "some constraints" or "many constraints".

Figure B-6: Types of Transportation Used by Patients



Transportation-Specific Questions

Provider Transportation

Half of responding providers indicated that they operate a transportation service themselves in order to ensure patients can access care. Information about these services, including funding and vehicles, is discussed in this section.

Provider Services

Respondents of the health provider survey were queried about provided transportation services by their providers. Thirty-eight percent of the respondents confirmed that their agency offers this service. Those who indicated they provide transportation services were subsequently asked several follow-up questions about their specific services. The answers reveal a significant need for transportation services among patients, with further details discussed below. Figure B-7 shows the clienteles level of need for a transportation service, and Figure B-8 shows what percentage of each agency's clientele uses their transportation service.

Surveyed providers were asked to identify the types of transportation services they provide patients. Figure B-9 shows all types of transportation provided by respondents.

Figure B-7: Clienteles Level of Need for Transportation Services

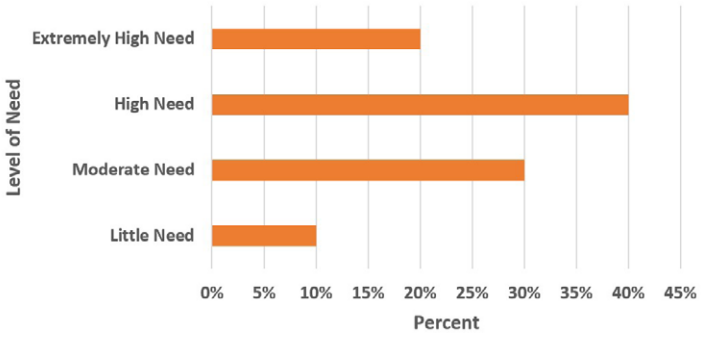


Figure B-8: Percent of Clientele Utilizing Agency Transportation Service

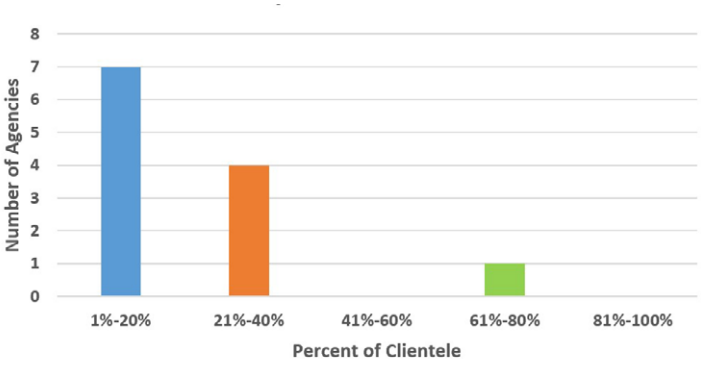
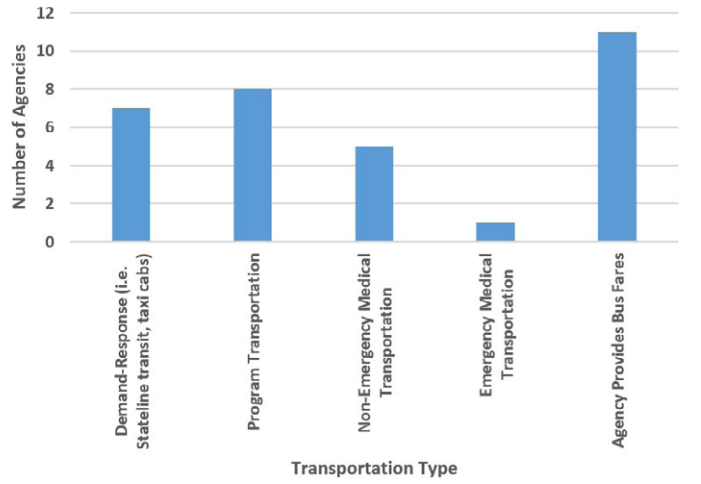


Figure B-9: Types of Transportation Provided by Providers



Demand Response

Demand response is any non-fixed route system of transporting individuals that necessitates advanced scheduling by the passenger. Services can be provided by public entities, nonprofits, and private providers.

Source: Federal Highway Administration[cxxxii]

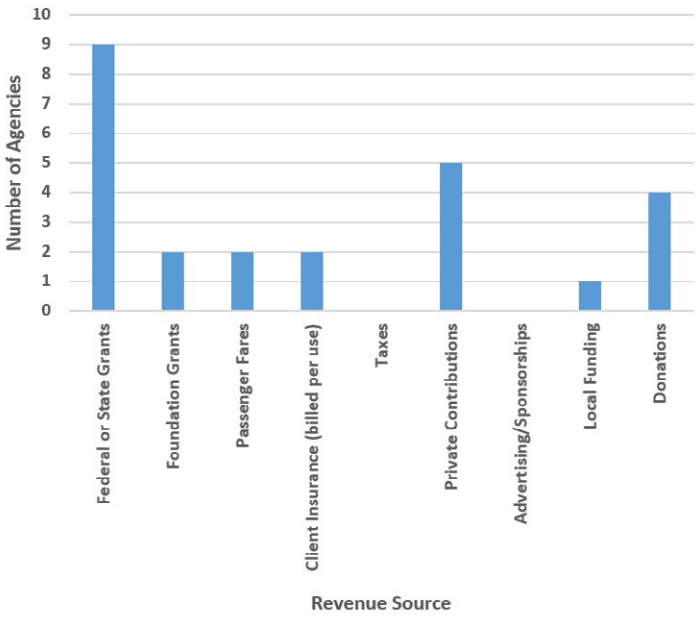
Twenty-three percent of the agency services provided door-to-door assistance for the patients and helped patients enter and exit the vehicles. The vast majority, 92.3 percent, are curb-to-curb, meaning the patient does receive assistance entering and exiting the departure and arrival points. Seventy-seven percent of surveyed providers stated that their transportation services are accessible to individuals with disabilities while the remaining 23 percent of services are not. To enhance transportation services for individuals with disabilities, providers can look to expand door-to-door services.

The transportation schedule is another factor that can influence whether a client is able to access an agency provided transportation services. Thirty-eight and a half percent of respondents offered same day services. Same day service allows for minimal planning from patients and gives them flexibility when scheduling appointments. Inversely, two providers required rides to be scheduled two to three weeks in advance and one agency required five days' notice.

Provider Funding

The responses from surveyed providers indicate a desire to improve their transportation services, though they are restricted by funding constraints. Sixty-four percent of respondents indicated that they are experiencing "many constraints" in regards to transportation services financial constraints. When asked what could improve their transportation service, 91 percent of respondents selected "an increase in funding". Providers were also asked to specify the revenue sources that fund their transportation services. Figure B-10 shows all transportation service revenue sources used by local health providers.

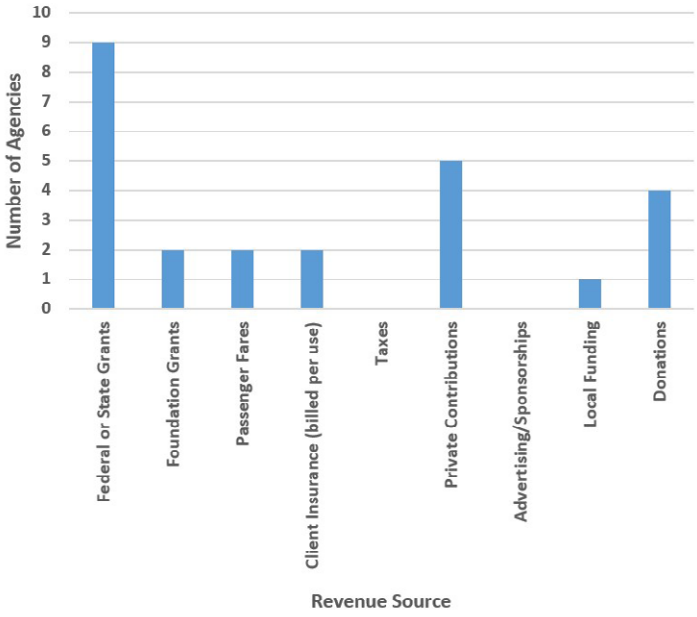
Figure B-10: Transportation Service Revenue Sources



Provider Vehicles

Healthcare providers located in the region use a variety of different vehicles to transport individuals seeking care. Figure B-11 shows the types of vehicles used by health providers in the region. Maintaining and replacing vehicles provides another constraint to a healthcare provider's transportation service. One third of providers expressed that maintaining and replacing vehicles provided "many constraints" to their transportation services.

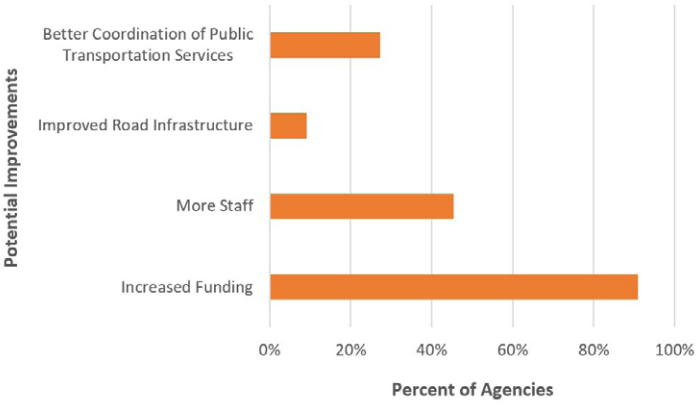
Figure B-11: Transportation Service Revenue Sources



Improvements to Service

Providers were also asked to identify ways they could improve their transportation services. The most commonly identified response was "an increase in funding", listed by 91 percent of responding providers. The full results can be seen in Figure B-12.

Figure B-12: Transportation Service Revenue Sources



Community Survey

In the development of this study, a public survey was distributed to better understand transportation experiences when traveling to healthcare providers. The survey was posted, via QR codes, in the waiting rooms of various medical facilities throughout the region. The survey was also uploaded to an online public engagement platform, Engage R1, where it was available to the public for several weeks. In-person surveys were also conducted at Crusader Clinic on West State Street in Rockford in order to engage directly with community members.

Despite these efforts, the survey did not produce high levels of engagement with only 21 complete surveys. While these survey results may not make up a representative sample of the region as a whole, they still provide insights into how individuals travel to health providers and their perceptions of safety during transit.

The majority of survey respondents, 57 percent, used their own vehicles to travel to their most recent health care appointment. The second most common mode of travel was public transportation, at 14 percent. Other modes noted in responses included walking, biking, and rides provided by friends, family members, or healthcare facility staff. Eighty-five percent of respondents indicated that the mode of travel used for their most recent appointment is their typical means of transportation to such appointments.

Just over 60 percent of respondents stated it was either easy or very easy for them to travel to their most recent health care appointment. Conversely, 29 percent of respondents indicated it was difficult or very difficult to travel to their last appointment. While this survey utilizes a small sample size, these responses emphasize the importance of addressing health and transportation issues.

When asked to identify factors that made their journey difficult, users of public transportation reported long wait times, distant stops, extended travel durations, and uncomfortable waiting areas. Bicyclists noted a lack of adequate bike lanes and the distance to the facility as factors that made their journey difficult. Respondents who received a ride from the health provider indicated it was difficult to arrange a ride while drivers also cited distance to the health care facility as a factor increasing travel difficulty.

Finally, respondents were asked if they felt safe or unsafe while traveling to their appointment. Very safe was the most common response, with 48 percent of those surveyed selecting this option. In total, 71 percent of respondents indicated they felt safe or very safe while traveling to their appointment. Nineteen percent of the survey group stated they felt unsafe while traveling to their last appointment.

Appendix C: Potential Funding Strategies

Public and private health care entities can leverage the following funding strategies to enhance or create transportation services dedicated to improving access to care. As indicated in the responses to the health provider survey summarized in Appendix B, funding is a major obstacle faced by providers who wish to improve their transportation services. These funding strategies can be used as a tool to overcome funding obstacles.

Considerations

Many of the funding sources, especially grant opportunities, presented below can be used by local jurisdictions to change the relationship between the region's transportation system and public health. The grant programs provide opportunities for improved active transportation facilities, reduced vehicle emissions, and other adjustments to the transportation system that yield positive community health outcomes. Agencies, organizations, and jurisdictions would benefit from reviewing the list of eligible applicants for each funding strategy to ensure they qualify to pursue funding opportunities presented. Many of the grant opportunities, including the Innovative Coordinated Access and Mobility (ICAM) program, allow for private stakeholders to partner with public agencies on an application.

Public private partnerships (P3) as well as other local funding sources are also discussed to provide local providers and jurisdiction with additional funding strategies. The use of these three types of funding strategies in concert allow for the goals and strategies of this plan to be realized, improving community health by addressing the relationship between health and transportation.

Types of Grants

Block grants: A grant from the federal government to a state, regional, or local government that provides a specified amount of funds to be used for a general purpose.
Discretionary grant: A grant in which a federal agency selected the grant recipient on the basis of merit and eligibility.

Source: US DOT

Grant Opportunities

There are a number of grant opportunities that local jurisdictions and private stakeholders can leverage to address health and transportation in the region. The grants identified in this plan are all distributed by the U.S. Department of Transportation (USDOT), through the Federal Highway Administration (FHWA), and Federal Transit Administration (FTA). Several of the opportunities identified are a result of the 2021 Bipartisan Infrastructure Law, which authorized 41.2 trillion for transportation and infrastructure spending.[cxxxiii]

Innovative Coordinated Access and Mobility

The Innovative Coordinated Access and Mobility (ICAM) Program seeks to improve access to public transportation by building partnerships between health, transportation, and other service providers. This competitive grant program focuses on supporting individuals in transportation disadvantaged communities by providing funding to projects that innovatively enhance the coordination of transportation services and non-emergency medical transportation services (NEMT). The ICAM program awards funding to innovative projects that provide these services for older adults, people with disabilities, and low-income individuals. These groups are considered by the FTA to be a part of transportation disadvantaged communities.[cxxxiv]

- **Issuing Agency:** Federal Transit Administration
- **Program Type:** Discretionary
- **Funding available in most recent fiscal year (subject to change):** FY23- $4.7 million
- **Principle Addressed:** Choices & Access for All
- **Social Determinants of Health Addressed:** Health Care Access and Quality; Neighborhood and Built Environment

Carbon Reduction Program

The Carbon Reduction Program (CRP) was established by the Bipartisan Infrastructure Law (BIL) to provide funds for projects designed to reduce transportation emissions, such as carbon dioxide (CO2) emissions from on-road highway sources. Funding can be allocated towards public transportation, pedestrian facilities, alternative fuels, traffic

management, and a number of other project types with the intent of lowering transportation emissions.[cxxxv]

- **Issuing Agency:** Federal Highway Administration
- **Program Type:** Block (Formula Funds)
- **Funding Available:** FY23- $1.258 billion; FY- $1.258 billion; FY25- $1.309 billion; FY26- $1.335 billion
- **Principles Addressed:** Healthy & Sustainable Environment
- **Social Determinants of Health Addressed:** Neighborhood and Built Environment; Social and Community Context

Charging and Fueling Infrastructure Grants Program

The Charging and Fueling Infrastructure Grants Program (CFI) program was created under BIL and provides funds for the implementation of publicly accessible EV charging and alternative fueling infrastructure. Funds are awarded to applicants who propose infrastructure locations strategically located near the places people live and work, or within a designated Alternative Fuel Corridor. The program includes locations in both urban and rural areas, such as downtowns and neighborhoods, and places an emphasis on providing charging and fueling infrastructure to underserved and disadvantaged communities. The CFI program provides the opportunity to reduce transportation emissions, thereby providing a positive community health impact.[cxxxvi]

- **Issuing Agency:** Federal Highway Administration
- **Program Type:** Discretionary
- **Funding Available:** FY22-26- $2.5 billion
- **Principles Addressed:** Healthy & Sustainable Environment
- **Social Determinants of Health Addressed:** Economic Stability; Neighborhood and Built Environment

Rebuilding American Infrastructure with Sustainability and Equity

The objective of the Rebuilding American Infrastructure with Sustainability and Equity (RAISE) program is to fund investments in surface transportation that align with the U.S. DOT's strategic goals, which include improving safety, environmental sustainability, mobility and community connectivity, and quality of life. These investments must have a significant impact on a region or locality, and can address highways, public transportation, passenger rail, intermodal facilities, and more. While health is not directly identified within the program's goals, health benefits can occur as a byproduct from many of the eligible project types.[cxxxvii]

- **Issuing Agency:** U.S. Department of Transportation
- **Program Type:** Discretionary
- **Funding Available:** FY24- $1.5 billion
- **Principles Addressed:** Active Lifestyles; Healthy & Sustainable Environment; Safety; Choices & Access for All; Equity
- **Social Determinants of Health Addressed:** Economic Stability; Education Access and Quality; Health Care Access and Quality; Neighborhood and Built Environment; Social and Community Context

Reconnecting Communities and Neighborhood Program

The overall goal of the Reconnecting Communities and Neighborhood Program (RCN) program is to support community-centered transportation connection projects. Funding is available for both planning and capital infrastructure projects. Particular attention is given by the program to projects that benefit disadvantaged communities and enhance access to jobs, education, healthcare, food, recreation, and other daily needs. This program combines the Reconnecting Communities Pilot Program (RCP) and Neighborhood Access and Equity Program (NAE) into one, and provides funding for both capital improvements and planning efforts.[cxxxviii]

- **Issuing Agency:** U.S. Department of Transportation
- **Program Type:** Discretionary
- **Funding Available:** FY23- $3.356 billion
- **Principles Addressed:** Active Lifestyles; Healthy & Sustainable Environment; Safety; Choices & Access for All; Equity.
- **Social Determinants of Health Addressed:** Economic Stability; Education Access and Quality; Health Care Access and Quality; Neighborhood and Built Environment; Social and Community Context.

Public-Private Partnerships

A public-private partnership (P3) is a contractual agreement between a public agency and a private entity that facilitates greater private participation in the delivery of projects.[cxxxix] The structure of P3s for transportation projects typically sees the private sector take on risk for one or more of the design, build, finance, operate, and maintain (DBFOM) phases of the

project. The shifting of responsibility to the private sector for certain phases of a project allows projects to overcome funding gaps and leverage the expertise of the private sector. The Build America Bureau explicitly recommends the use of P3s in the development and delivery of transportation improvements.[cxl]

Public-private partnerships for transportation infrastructure projects have become more commonplace in recent decades. These partnerships can also be used to improve healthcare services. Healthcare P3s also use the DBFOM model, as well as the deliver function, or the delivery of specified clinical and clinical support services. In healthcare, P3s typically lead to new or improved public health infrastructure or new or expanded service delivery capacity.[cxli] The opportunities for P3s that address both healthcare and transportation are ample, and can be found at the intersection of the delivery, finance, and operation phases.

Public-private partnerships that create or expand public transportation services to health care providers have been used effectively in the U.S. in recent years. For these types of projects, the private sector can provide the funding to purchase and maintain vehicles, pay staff, and operate demand response software systems. By combining the resources of the private and public sector, NEMT services can be developed and enhanced.

In rural Missouri, public transportation services to health providers were nonexistent until 2014, when the Missouri Rural Health Association (MRHA) launched HealthTran. Initially funded by grants from the Missouri Foundation for Health, HealthTran provides on demand ride services to patients of health providers. HealthTran transitioned to a P3 model after 2015, with the private agency Community Asset Builders (CAB) providing volunteer drivers for the program. With the support of CAB, HealthTran has been able to move toward being a self-sustaining service[cxlii]. This program provides an example of a P3 improving transportation services to healthcare.

Other Funding Strategies

In addition to federal grants and public-private partnerships, funding for transportation-related services for healthcare for the Rockford Region can come from unique sources, including the Winnebago County Community Mental Health Board and private foundations.

Winnebago County Community Mental Health Board

The Winnebago County Community Mental Board (WCCMHB) was created in 2020 through a county ordinance to plan implement, and monitor a system of mental health and substance abuse services for Winnebago County residents suffering from serious mental illness (SMI) and substance abuse. In 2020 a half-cent sales tax with the purpose of funding the WCCMHB was passed in a Primary election; in 2024 the tax was extended via a general election. The WCCMHB has an intergovernmental agreement with R1 under which R1 staff performs the WCCMHBs administrative functions.[cxliii]

The Winnebago County Community Mental Health Board administers the funds generated by a one-half cent sales tax, distributing them to 44 different programs providing care for SMI and substance abuse.[cxliv] The WCCMHB applies a holistic approach to the administration of the programs it funds. This approach is referred to by the WCCMHB as the Community Support System Framework, and guides their planning and health funding. One component of the Community Support System Framework is Client Identification and Outreach, which includes the subcomponent "Transportation Assistance".[cxlv]

The inclusion of this component in WCCMHB's strategic plan demonstrates the board's commitment to addressing transportation issues care seekers face, and the data provided by the WCCMHB shows their work is having an effect. In the three years since the one-half cent sales tax began providing additional funding to SMI and substance abuse programs in Winnebago County, mobile services provided by these programs have increased by 20 to 30 percent. The WCCMHB anticipates that the availability of mobile services provided by their funded programs will continue to increase in the future as programs see the benefit of working in the community.

Within the WCCMHB's Strategic Plan 2.0, a list of strategies to support the implementation of the WCCMHB Community Support System Framework is included. One strategy specifically states that the WCCMHB is seeking to "increase availability of navigable and consistent transportation for patients to travel to and from mental health and substance abuse services". The Winnebago County Community Mental Health Board is working to meet this goal by procuring a HIPPA compliant contract with a transportation network company (TNC), such as Uber or Lyft. This contract would apply to all WCCMHB funded programs who wish to add the service to their program, and would significantly increase Winnebago County's resident's ability to access mental health and substance abuse services. The Winnebago County Community Mental Health Board hopes to have this contract procured and active by summer 2024.

Figure C-1: Community Support System Framework

Community Support System Framework

Client Identification and Outreach
- Client Identification
- Outreach
- Transportation Assistance

Mental Health Treatment
- Diagnostic Evaluation
- Supportive Counseling
- Medication Management
- Substance Abuse Services

Crisis Response Services
- Crisis Telephone Services
- Walk-In Crisis Services
- Crisis Outreach Services
- Crisis Residential Services

Health and Dental Services

Housing
- Supportive Housing
- Residential Assistance for Homeless Mentally Ill Persons

Income Support

Peer Support
- Self-Help
- Consumer-Operated Services

Family and Community Support
- Assistance to Families
- Education for the Community

Rehabilitation Services
- Social Rehabilitation
- Vocational Rehabilitation

Protection and Advocacy

Case Management

While the HIPPA compliant rideshare contract discussed above only applies to WCCMHB programs, its success may signal to other health care providers, both public and private, the benefit of providing rideshare services to their patients. As discussed in Appendix B. Stakeholder & Public Engagement, one of the most common reasons why patients miss appointments is transportation. By integrating rideshare services with HIPPA, providers can provide better access to care to their patients, reduce missed appointments, and minimize financial losses.

Volkswagen Trust Fund

Volkswagen AG (VW) installed "defeat devices" on 580,000 of their diesel engine vehicles between the years 2009 and 2016 in order to circumvent emissions testing, violating the Clean Air Act. These violations were eventually detected by the relevant authorities, and a civil case ultimately led to a settlement worth just under $15 billion. The settlement included $10 billion worth of vehicle buybacks and a commitment to electrification of future vehicles, but a third program provides funding to states and tribes for projects that reduce nitrogen oxide emissions.[cxlvi]

The IEPA is responsible for administering the $108 million allocated to the state of Illinois by the Volkswagen Environmental Mitigation Trust Fund. Illinois' beneficiary mitigation plan (BMP), which outlays goals and priorities for the funding, states that 80 percent of the funds must be obligated within 10 years. Illinois revised its BMP in April of 2022 and now features these four goals for the use of the Trust funds:

- Reduce NOx emissions in areas where the affected Volkswagen vehicles were registered while taking into consideration areas that are nonattainment for ozone or bear a disproportionate share of the air pollution burden, including environmental justice areas,
- Decarbonize Illinois' transportation sector,
- Align funding with state priorities to establish a reliable network of charging infrastructure to promote the transition to an electrified transportation sector to support business and consumer needs, and
- Support public transportation needs of Illinois residents, including school children.[cxlvii]

Winnebago County is identified as Priority Area III in the states BMP, as more than one percent of the total affected VW vehicles were in the county.[cxlviii] These facts mean this funding source is worth pursuing for health and transportation stakeholders in the Rockford Region.

The IEPA administers the VW funds under a grant program called "Driving a Cleaner Illinois". As of Spring 2024, there was no active Notice of Funding Opportunity (NOFO) for the VW funds, but four previous rounds of awards have taken place.[cxlix] Awards have been made to several school districts for electrified school buses and charging stations, EVs have been granted to transit agencies, and several private companies have received awards to build EV infrastructure. It can be anticipated that more funding opportunities will arise from this trust in the future, and that these funds can be used to help address the goals and strategies of this plan.

Appendix D: Connections to Regional Plans and Studies

Illinois Department of Transportation

Illinois Long Range Transportation Plan (2019)

The Illinois Long Range Transportation Plan (LRTP) is a required document updated every five years that provides strategic direction for the development of the Illinois transportation system over a time frame of at least 20 years. The LRTP vision for transportation in Illinois is to provide innovative, sustainable, and multimodal transportation solutions that support local goals and grow Illinois' economy. The goals outlined by the most recent LRTP include economy, livability, mobility, resiliency, and stewardship. These priority areas align with the strategies of this Health and Transportation Study, specifically under livability which focuses on supporting a transportation system that provides safe, reliable access to health services.

Regional

Bicycle & Pedestrian Plan for the Rockford Metropolitan Area (2023)

The Bicycle and Pedestrian Plan aims to promote a safe and efficient transportation network for all users. The plan proposes the development of a region-wide system of on-street bicycle and pedestrian facilities to connect with existing shared-use path facilities and public transportation services in the Rockford Metropolitan Planning Area (MPA). The Bicycle and Pedestrian Plan's objectives also seek to improve health throughout the region by promoting active transportation and enhancing access to health needs and services; these objectives align with the strategies of this Health and Transportation Study.

Coordinated Public Transit Human Services Transportation Plan for the Rockford Region (2021)

The purpose of this plan is to identify and address needs and gaps in the network of transportation providers and human service agencies in the Rockford MPA. Increased coordination and partnership throughout the region can improve overall quality of life and promote sustainable lifestyles, particularly for transit-dependent populations such as seniors, individuals with disabilities, and low-income individuals. The aims of this plan align with the goals of the Health and Transportation Study, particularly in terms of integrating health equity into transportation planning.

2021-2025 Comprehensive Economic Development Strategy for Northern Illinois (2020)

The Comprehensive Economic Development Strategy (CEDS) is a document updated every five years that discusses strategies and action items centered on collaboration in Northern Illinois to advance economic development. One of the goals outlined by the CEDS focuses on achieving a high quality of life enhanced by the region's community health, particularly through the promotion of healthy lifestyle choices such as active transportation and accessing health care and healthy foods.

Rockford Region Vital Signs: Regional Plan for Sustainable Development (2014)

This plan seeks to enhance community sustainability by putting forth a framework to ensure the social, economic, and environmental well-being of the region. The primary goals established in this plan include expanding transportation choices, supporting communities, and coordinating policies. The Vital Signs Plan aligns with the goals of this Health and Transportation Study in promoting public health through active transportation opportunities and using equity to frame community health.

Title VI & Environmental Justice Considerations for the Rockford Metropolitan Planning Organization (2022)

The purpose of the Title VI and Environmental Justice Considerations Program is to reflect the MPO's commitment to implementing planning processes designed to protect against discrimination and ensure that provisions of fairness and consideration of issues impacting disadvantaged residents. Additionally, this program outlines strategies and tools utilized by the MPO to reach and involve all residents. The environmental justice aspect of this program involves aspects of this Health and Transportation Study's goal to integrate health equity in transportation planning, such as minimizing or avoiding adverse health effects on minority and low-income populations.

2050 Metropolitan Transportation Plan for the Rockford Region (2020)

The purpose of this federally required plan is to identify transportation priorities over the next 20 to 30 years in the Rockford MPA, consisting of Boone County, Winnebago County, and northern Ogle County. The MTP discusses several connections between transportation networks and health outcomes such as land use, air quality, and active and alternative transportation. This Health and Transportation Study expands on these links to provide a framework for how transportation can improve health throughout the MPA.

2021 Greenways: A Greenways Plan for Boone, Ogle, and Winnebago Counties (2021)

The purpose of the Greenways Plan is to promote a regional greenway network that protects natural and cultural resources, encourages equal access to green space, provides alternative forms of transportation and recreational benefits, enhances environmental qualities, and stimulates sustainable and equitable development. This plan also explores how regional parks and greenways can contribute to improved health outcomes by providing individuals with opportunities for recreation, physical activity, and active transportation. Similarly, one of the strategies outlined in this Health and Transportation Study is to support healthy lifestyles through methods such as increasing access to parks and green space.

Transportation Improvement Program (FY 2024- 2027)

The Transportation Improvement Program (TIP) is a federally required document that outlines anticipated transportation projects within the Rockford MPA over a four-year period. Projects documented in the TIP include those receiving federal and state funds, regionally significant projects, and public transportation operations. The MPO develops a TIP every year with updates periodically completed throughout the fiscal year.

Transportation Safety Plan for the Rockford Region (2021)

This regional plan was developed by the MPO to promote ongoing communication, coordination, and education regarding transportation safety between the MPO, local partner agencies, and the public. The guiding principles and priorities of the document included developing an understanding of current regional transportation safety, identifying regional trends, establishing safety improvement goals, and creating the framework for an action plan. This plan relates to the Health and Transportation Study strategies as it aims to provide a safe transportation system and reduce transportation-related injuries and fatalities in the region.

Local

Boone County Health Department's IPLAN 2024 - 2027 (2024)

The Illinois Plan for Local Area Needs (IPLAN) adopted by Boone County Health Department (BCHD) in 2024 identified behavioral health, maternal child health, and food security as the top three health priorities in the County. These three priority areas were considered through a health equity lens, such as access to care and health services. Incorporating health equity into this IPLAN introduced a goal to minimize disparities in health care through efforts such as removing transportation barriers. This goal is related to a variety of strategies outlined in this Health and Transportation Study including improving health care access through transportation and integrating health equity into transportation planning.

City of Rockford's Complete Streets Policy (2017)

The City of Rockford's Complete Streets Policy identifies the need for the development of a safe and accessible multi-modal transportation network. Additionally, this policy identifies benefits associated with Complete Streets, such as encouraging active transportation that improves health and well-being. Similarly, this Health and Transportation Study identifies active transportation as one of the main objectives related to supporting healthy lifestyles and promoting an improved quality of life.

Rockford Citywide Health Literacy Initiative

The Rockford Citywide Health Literacy Initiative aims to address health literacy, COVID-19 vaccination hesitancy, and mistrust of the health care system among Rockford residents. The initiative will address health literacy issues by engaging with local healthcare providers, community organizations, and residents. The initiative seeks to empower them to share credible, effective resources that will assist with increasing COVID-19 vaccination adoption and improve communications between healthcare providers and patients[cl].

Winnebago County Health Department's IPLAN 2023 (2021)

Conducted at least every five years, the Illinois Project for Local Assessment of Needs (IPLAN) is a strategic planning activity required by the IDPH for local public health departments to obtain certification. The Winnebago County Health Department (WCHD) IPLAN for 2023 identified three health priorities: maternal and child health, mental and behavioral health, and violence prevention. These priority areas form the basis of the WCHD's strategic plan to improve community health. A particular emphasis is placed on health equity throughout this IPLAN; this framework aligns with this Health and Transportation Study's goal of integrating health equity into transportation planning to increase access to health services and promote healthy lifestyles.

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Appendix D:

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Region 1 Planning Council

127 N Wyman St. Suite 100

Rockford, Illinois 61101

815-319-4180 | info@r1planning.org