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**Bring Health Reform Home: Mapping Emergency Room
Use to Understand Health Opportunity in Kansas City**

A Collaboration Research Report from:

Kirwan Institute for the Study of Race and Ethnicity
Communities Creating Opportunity (CCO)
and PICO National Network

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Executive Summary

Conclusion

The residents of ten zip codes in Kansas City are experiencing a life-threatening failure of the health care system. The people who live in these areas, marginalized communities of color, are dying sooner and suffering more catastrophic illnesses than those who live in more affluent and largely white communities.

Introduction

The study maps high concentrations of emergency room usage, the “hot spots,” in order to better understand the primary care needs of the community, the costs of using the emergency room (ER) system, and how to transform health care away from ER use and instead reinvest in these “hot spot” communities to build healthy families. Subsequent mapping analysis of all data reveals the scope and depth of the challenges to overall community health.

Section I. Emergency Room Case Study

Emergency room usage data is the key diagnostic tool for understanding access to care and the social determinants of health in the communities. The systemic analysis used in this report differs significantly from previous studies, which tend to focus on attempts to make emergency rooms run more efficiently, or on specific illnesses such as diabetes. Instead, our study begins with the ER, but then expands spatially outside the walls of the hospital and beyond a single patient population into the community at large. In addition to determining “hot spots,” this report asks what medical conditions bring people to the ER and are these illnesses preventable, are ER users insured or uninsured, and what is the intersection of preventative health care access, race, poverty, and other social determinants of health with ER use?

Map Series 1 through 3 are visual representations of data for ER usage which are then combined with the data for poverty, race, the location of primary care physicians, specific conditions such as asthma and influenza, and by the type of insurance used by patients. Bar graphs describe the racial makeup and poverty rate of the “hot spot” zip codes.

Section II. Cost of High ER Usage and Inaccessible Primary Care

Reliance on the ER for treatment of preventable and chronic conditions is not sustainable for the health care system as well as for the individuals and communities using the system. It is an ineffective use of limited health care dollars. As the costs of health care continue to rise, and as the State of Missouri struggles to balance the increased costs associated with the expansion in Medicaid, the results may be further cuts to reimbursement and a decrease in primary care physicians that accept Medicaid patients, leaving these patients only one option: the ER. Medicaid coverage is an improvement over no coverage at all, but does not mean that patients using Medicaid can expect improved access to health care.

Section III. Opportunity, Place, and Health Outcomes

Whites and racial minorities experience starkly different neighborhood contexts, which result in

different exposures to “positive factors, such as resources and services, as well as “negative” factors, like violence and environmental toxins. Irrespective of factors like personal motivation to be healthy or access to a primary care provider, where one lives exerts a strong, independent effect on health by determining access to opportunity structures. We suspected that areas with high ER admissions, especially for preventable conditions, are an indication that these neighborhoods are facing structural elements that are impacting the health of the people who live there.

Maps Series 4 through Map 8 describe environmental and social health in the community. The ER admission “hot spots” are overlaid with data about food availability, unemployment rates, vacant home rates, infant mortality, and life expectancy at birth.

Section IV. Health Disparities and Race

This report’s analysis shows not only how access to primary health care matters for health outcomes, but also how place is deeply implicated in these outcomes. The ER case study (Section I) also suggests race is a significant indicator of health outcome. People of color get sick younger, have more severe illnesses, and die sooner than whites. Socioeconomic status is one of the most powerful predictors of health and while class status accounts for a larger part of the racial differences in health, research has found that there is an *added* burden of race, over and above socioeconomic status. Race and class are related, they are not *interchangeable* systems of inequality.

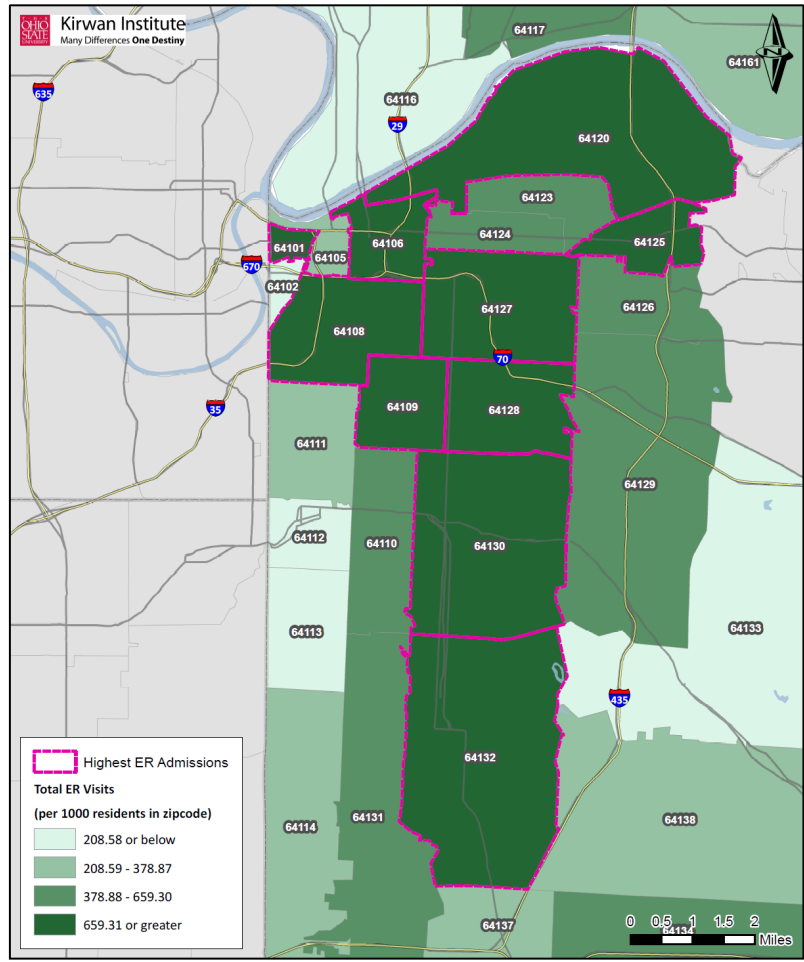
Recommendations

- Reorganize local Medicaid system to work better for families in the ten zip codes included in this study.
- Suggested actions for the medical community include providing billing data to further identify “hot spots” so that activists and provide non-medical interventions, primary care providers to form “high utilizer” teams to focus on patients who frequent the ER as well as provide higher quality direct care as well as connect patients to social support, and specialists to work with primary care providers.
- Suggested actions for the political community include hearings for elected officials to hear personal testimonies and proposed solutions, state legislators can create legislation to capture Medicaid savings and return the funds back into the Safety Net health system, and tour successful health care providers successfully using innovative models.
- Citizens can share stories of the necessity of health care with others at House Gatherings, informally “lobby” elected officials, and ask personal physicians to get involved, and work with existing organizations.

Map 1.0 - Total ER Admissions Rates

Total rate of ER admissions by zip code

Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Introduction

Community health is complex—poverty, environmental conditions, and the health delivery system are all implicated in health outcomes, outcomes that include disparities. To better understand these health disparities in our communities, we are using emergency room (ER) visits, in particular preventable admissions, as an indicator of larger systemic health issues.

Emergency room data show us what health crises are happening in our communities. Those crises may be heart attacks, strokes or other critical conditions, or they may be complications from chronic or common conditions ranging from diabetes to influenza. The emergency room admissions from preventable conditions and untreated chronic conditions suggest that communities suffering from these illnesses are underserved by the health care delivery system. In many cases, the health conditions would have been better handled by primary care physicians if caught early enough, but because families do not have access to these doctors, they rely instead on the Emergency Health system.

Individual health emergencies illustrates a community health emergency; a crisis for communities that do not have access to essential health care resources and who live under the constant duress of various social and environmental conditions which degrade health. Such emergencies indicate those areas where the healthcare system is not serving communities adequately and also identifies areas where we spend the most resources on costly emergency care. Understanding this inefficiency in utilizing our limited health care resources represents an opportunity for identifying places where resources could be more effectively utilized for preventive care and addressing social and environmental determinants of health.

The purpose of our study is to map where there are high concentrations of emergency room usage, the “hot spots,” in order to better understand the primary care needs of the community, the costs of using the ER system, and how to transform health care away from ER use and instead reinvest in these “hot spot” communities to build stronger, thriving and healthier families.

Our research sought to understand a number of questions about the geography of ER use and health conditions in the region:

- Where are the geographic “hot spots” of ER use in the community?
- What are people coming in to the ER for, and is it a preventable or chronic condition?
- How are people using the ER?
- Are ER users insured or are they uninsured?
- What is the intersection of preventative health care access, race, poverty and other social determinants of health with ER use, especially in the “hot spots”?

Finally, what does this tell us about the use of health care resources and do we see a relationship between areas of high ER usage and health outcomes for communities?

The remaining report is laid out as follows. Section I introduces how the ER is a useful source for data, and what using the ER data can tell us about the conditions outside of the ER, in the broader community. This section also presents our mapping analysis of ER usage. Section II discusses the costs associated with the over-reliance on the ER for primary care. Section III describes how health outcomes are inextricably linked to opportunity and place, and how the social determinants of health figure prominently in health outcomes. Section IV looks at health disparities and race, and describes how race

has an independent effect on health outcomes. This section also describes in greater detail some of the health disparities evident in the region. The report closes with a call to action, illustrating the steps that can be taken by policy makers, community members, and the medical community to bring about the transformative change to the health care delivery system that is so clearly needed.

Section I. Emergency Room Case Study

Emergency room usage data is a key diagnostic tool for understanding access to care and the social determinants of health in the communities. In this analysis, we leverage the wealth of data that ERs generate every day to shed some light on community needs. Our intention is to use ER data to highlight where the greatest health disparities are and the preventable conditions that communities need direct preventative care for. Armed with this data, on-the-ground organizations can engage the impacted community to work together and redirect resources from ER care to a higher level of—and more effective—preventive care for the families that need it most. We hope that activists can transform these data into community engagement tools to address local social determinants of health.

Our approach is an extension and reorientation of prior efforts that have capitalized on the unique ability of emergency rooms to generate useful data. Prior efforts we're aware of have been limited in one or both of the following ways:

- On the ER itself as a site of health care delivery that requires quality improvement
- On improving care for a specific patient population, such as persons with diabetes

Corollary to these limitations, prior efforts have tended to justify themselves on the basis of cost-savings and, additionally, have tended to employ top-down solutions to care coordination. Although cost-savings is a consideration for any initiative to change health systems delivery, our primary interest is in bottom-up community engagement and transformation. We instead begin with the ER but then expand spatially outside the walls of the hospital and beyond a single patient population into the community at large.

To this end, we gather data from two separate levels: the ER level and the community level.

- ER level.** We obtained data from the Kansas City Health Department on ER admissions, preventable conditions, and insurance type.
- Community level.** We obtained data from multiple sources, including US Census 2010 and American Community Survey 2005-2009 data, and independent field work of food access provided by Mid-American Regional Council. The data highlight the social and environmental conditions in order to contextualize the ER admissions analysis.

These two levels constitute the data infrastructure that will be the foundation for community engagement. After gathering these data, we geocoded and mapped them using geographic information system (GIS) technology. These maps are a visualization of ER use within Kansas City at the neighborhood level, layered with information about the social determinants of health in the individual neighborhoods themselves.

The following are the specific analyses we will provide:

- Where are the geographic “hot spots” of ER use in Kansas City?

- What are people coming in to the ER for, and is it a preventable condition?
- How are people using the ER: are they insured or are they uninsured?
- What is the intersection of preventative health care access, race, poverty and other social determinants of health with ER use, especially in the “hot spots”?

Map Series 1: ER Admissions and “Hot Spots”

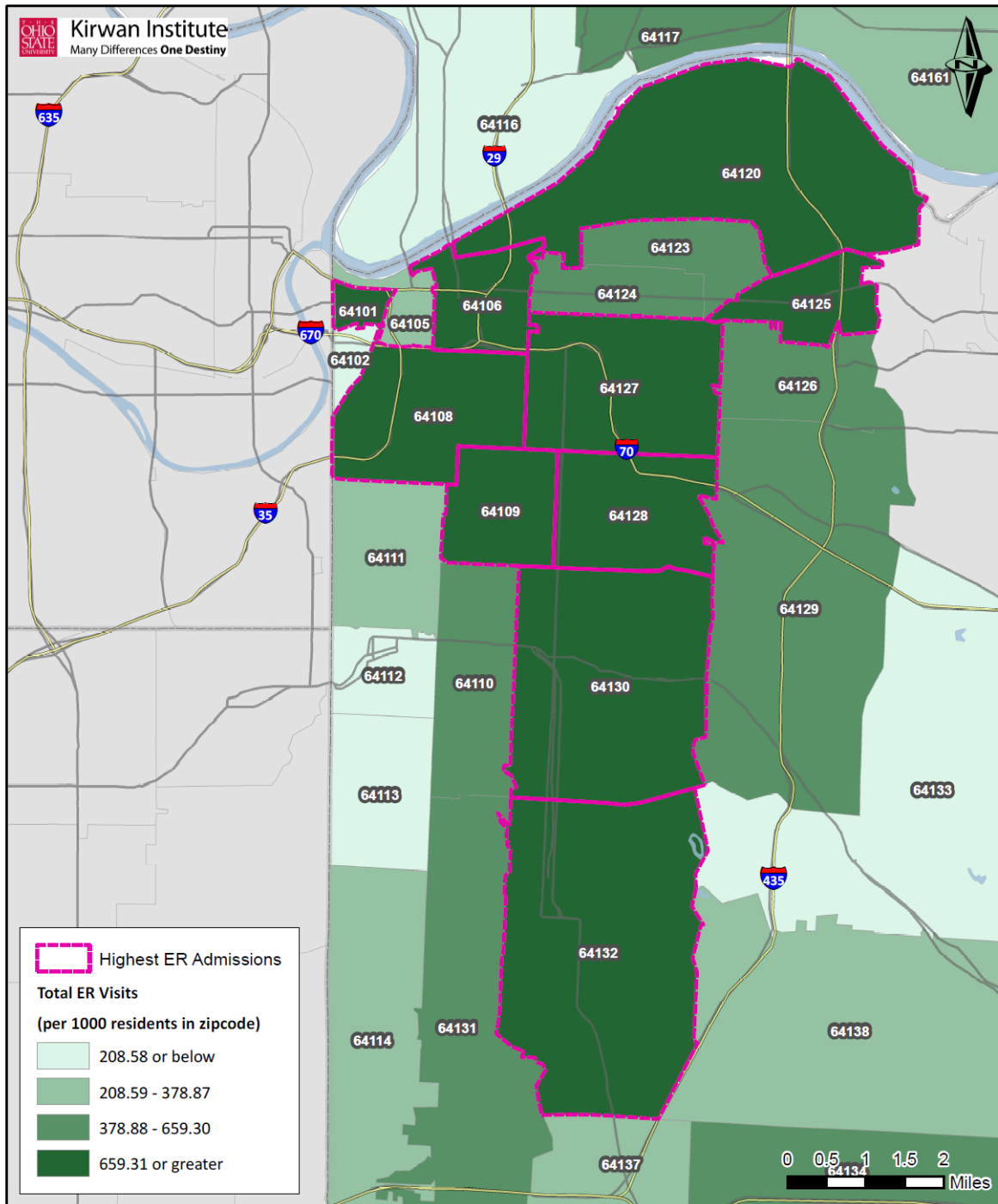
Map 1.0 shows the total number of ER admissions by zip code. This map also shows that a handful of zip codes have the highest rate of ER admissions (the “hot spots”). There are ten zip codes that contain approximately 38% of all ER admissions. These ten represent about one-fifth of all residents in Kansas City.

Map 1.1 shows the total ER admissions by zip code, overlaid on poverty rates. As shown in the map, areas with the highest number of ER admissions are also those that have higher concentrations of poverty.

Map 1.0 - Total ER Admissions Rates

Total rate of ER admissions by zip code

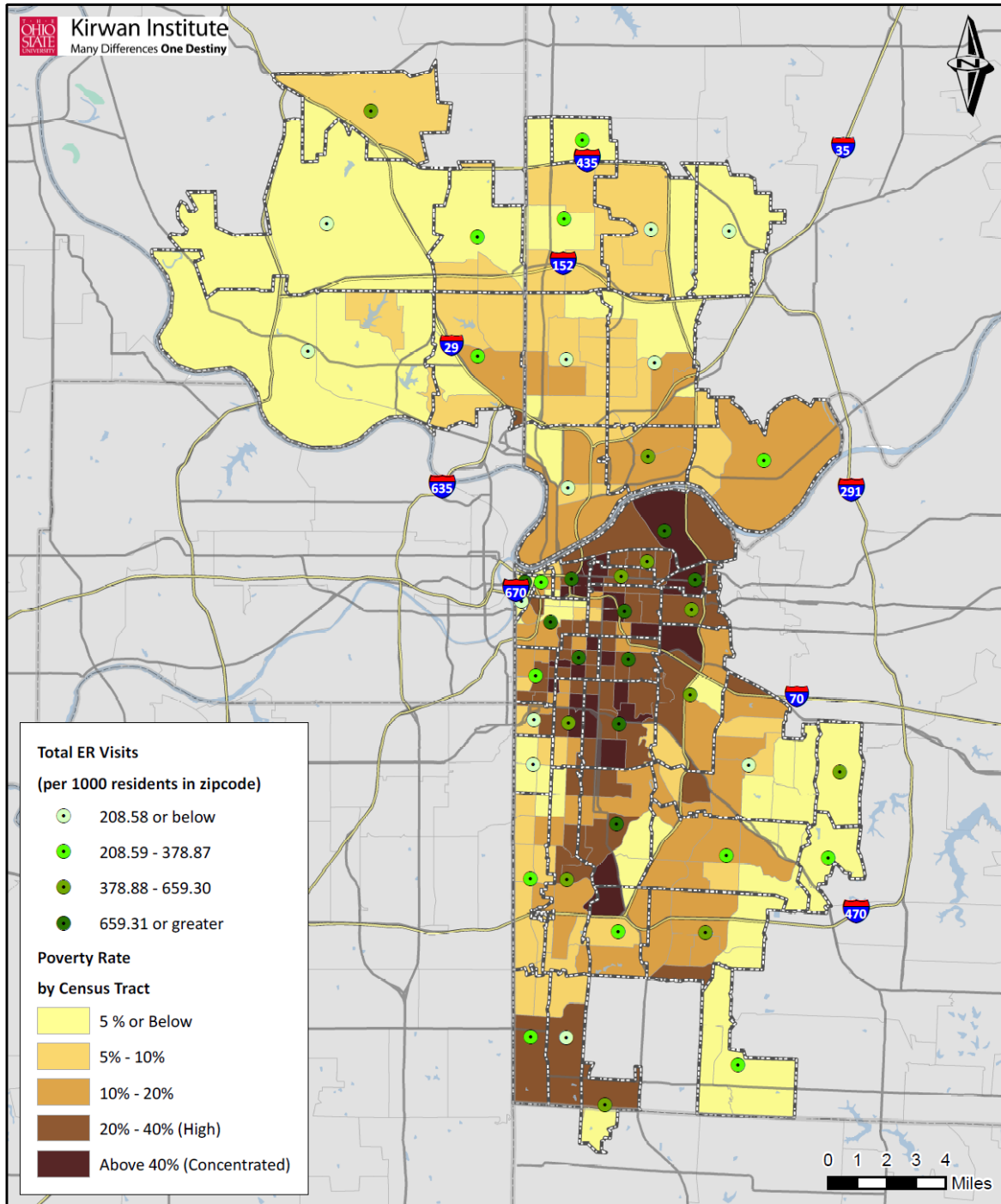
Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 1.1 - ER Admissions and Poverty Rate (Kansas City, MO)

Total ER Admissions by zipcode, overlaid with neighborhood poverty rate

Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Maps 1.2 and 1.3 focus on the zip codes with the highest ER admissions, and overlay these zip codes with non-white population rates and poverty rates. Again, we can see in finer detail that the zip codes with the highest ER admissions are those that are majority non-white and have higher concentrations of poverty. **Figure 1** below gives a more detailed analysis. For example, while African Americans make up only about 27% of the Kansas City population, they make up about 68% of the population in the “hot spot” zip codes. This is almost completely reversed for whites. While whites represent approximately 62% of the Kansas City population, they represent only 21% of the population in the “hot spots.” **Figure 2** shows that the city has a poverty rate of 13%, compared to an almost 32% poverty rate in the “hot spot” zip codes.

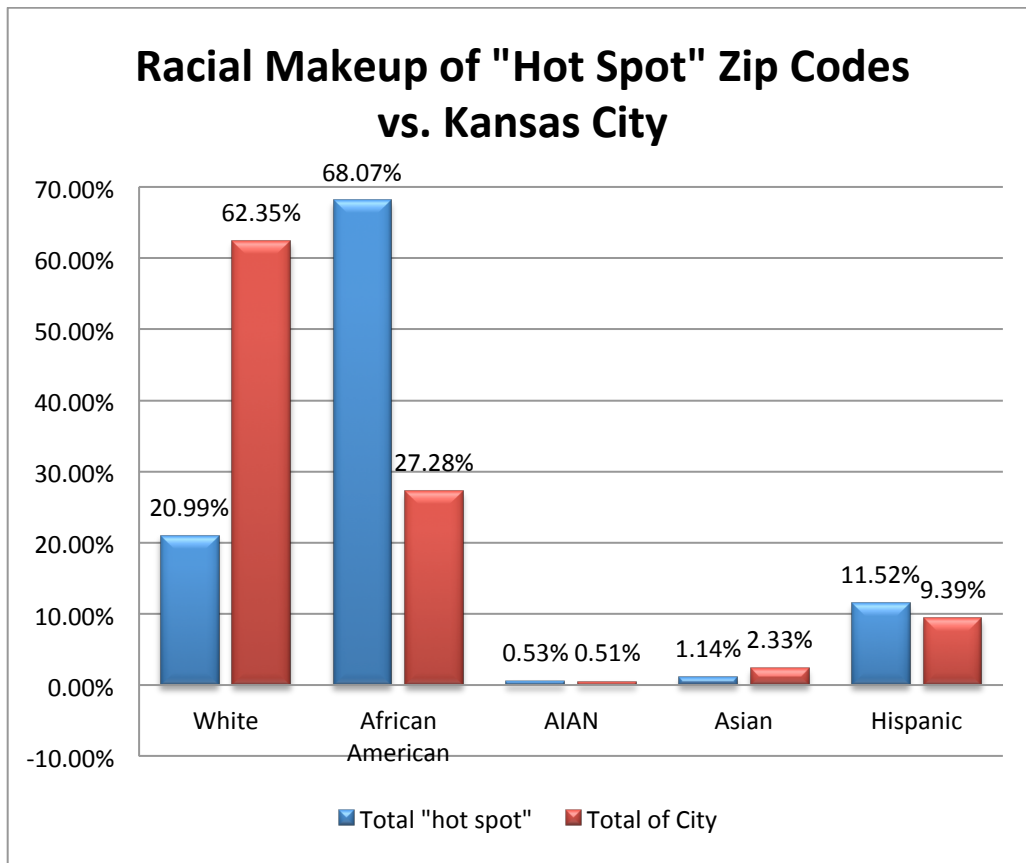


Figure 1. Comparison of racial population between zip codes with the highest ER admissions and Kansas City. Source: US Census 2010

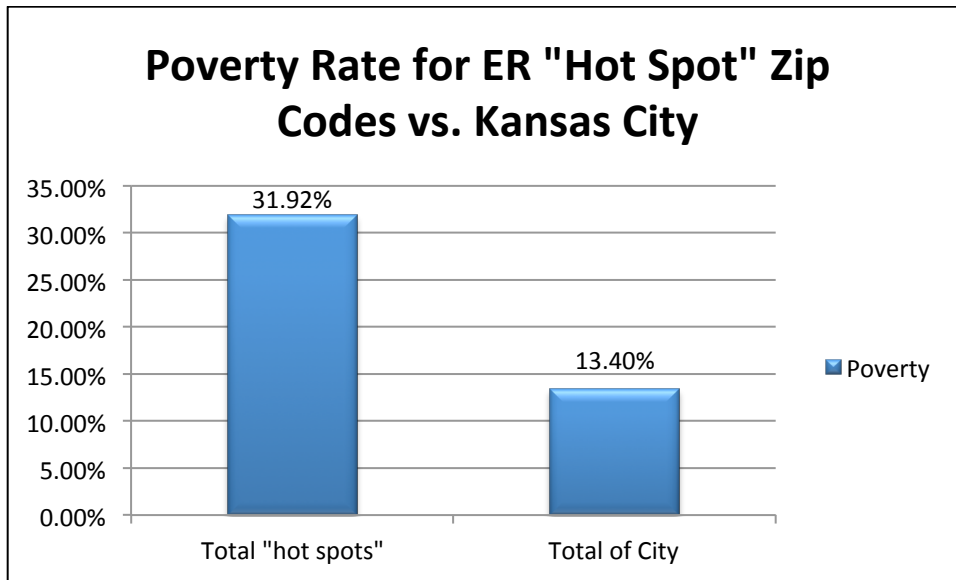
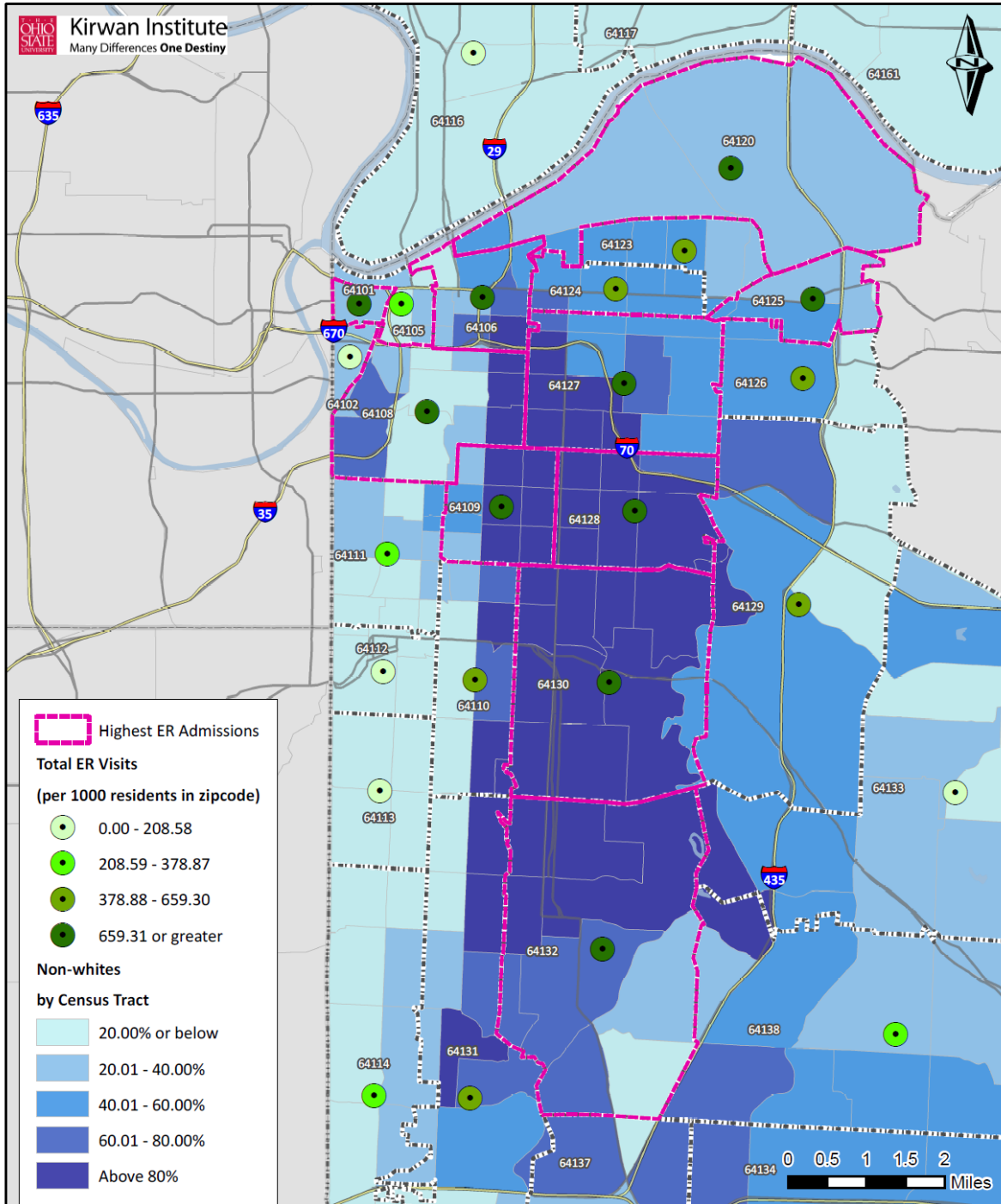


Figure 2. Comparison of poverty rates between zip codes with the highest ER admissions and Kansas City. Source: American Community Survey 2005-2009

Map 1.2 - ER Admissions and Non-White Population (Kansas City, MO)

Highest rate of ER admissions by zip code, overlaid on non-white population rates

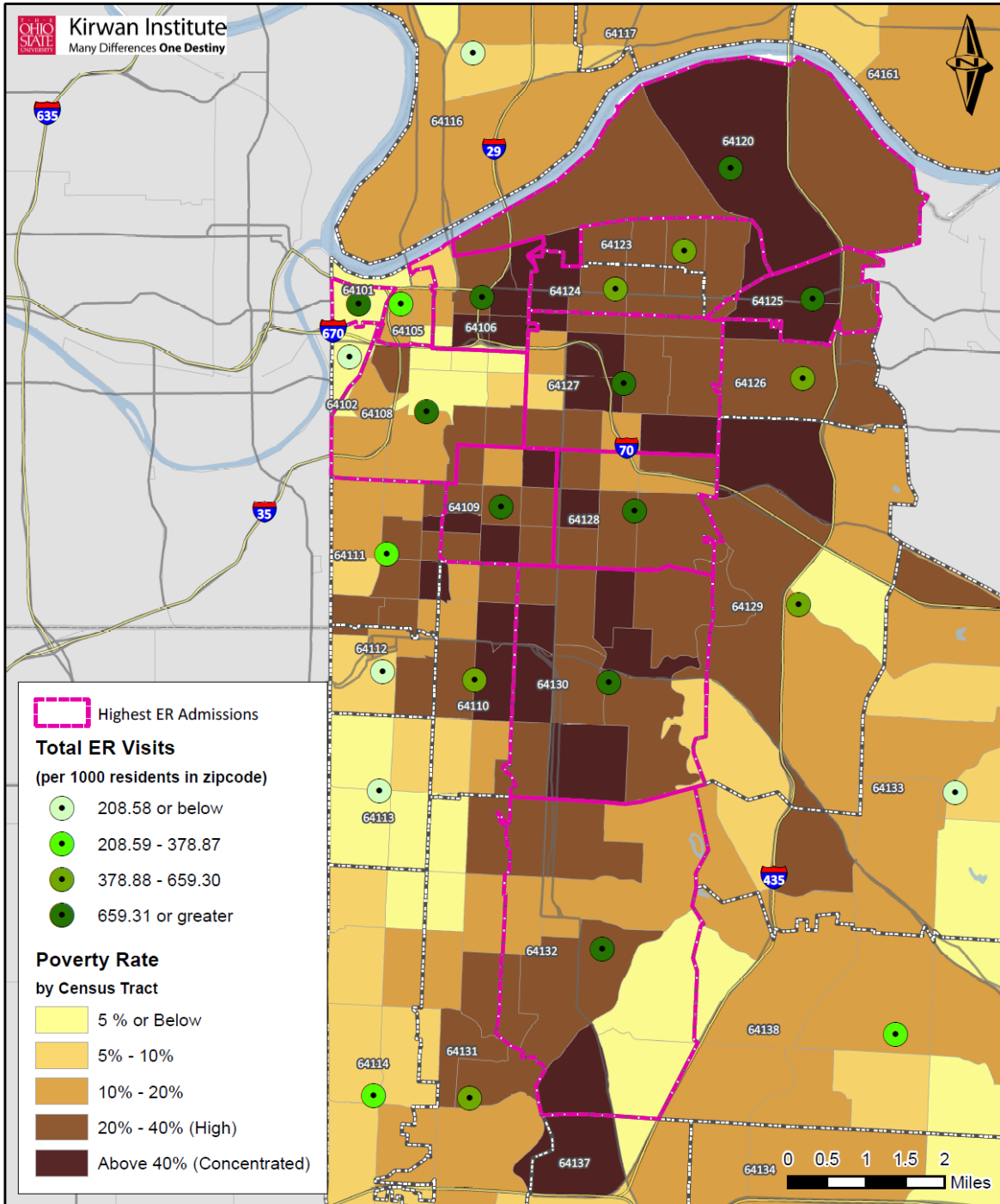
Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 1.3 - ER Admissions and Poverty (Kansas City, MO)

Highest rate of ER admissions by zip code, overlaid with neighborhood poverty rates

Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 1.4 shows the primary care physician locations in the highest ER admission zip codes. It is evident that there is a shortage of primary care physicians in these areas. In fact, there are only thirty-two locations, out of a city-wide total of 257, in the “hot spots” (**Figure 3**).

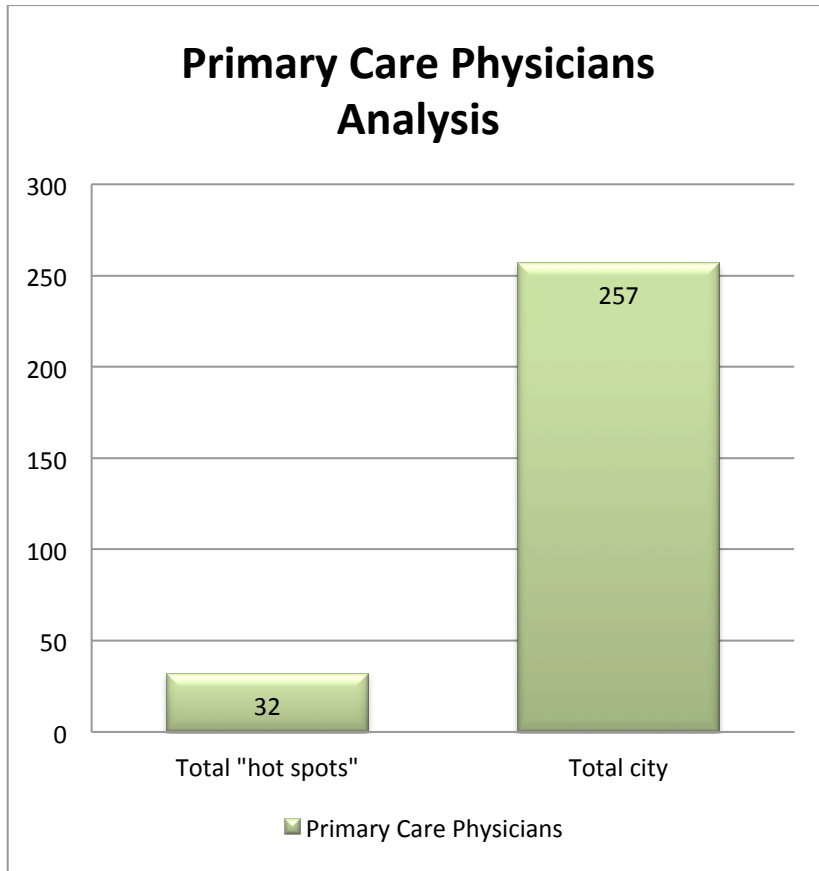
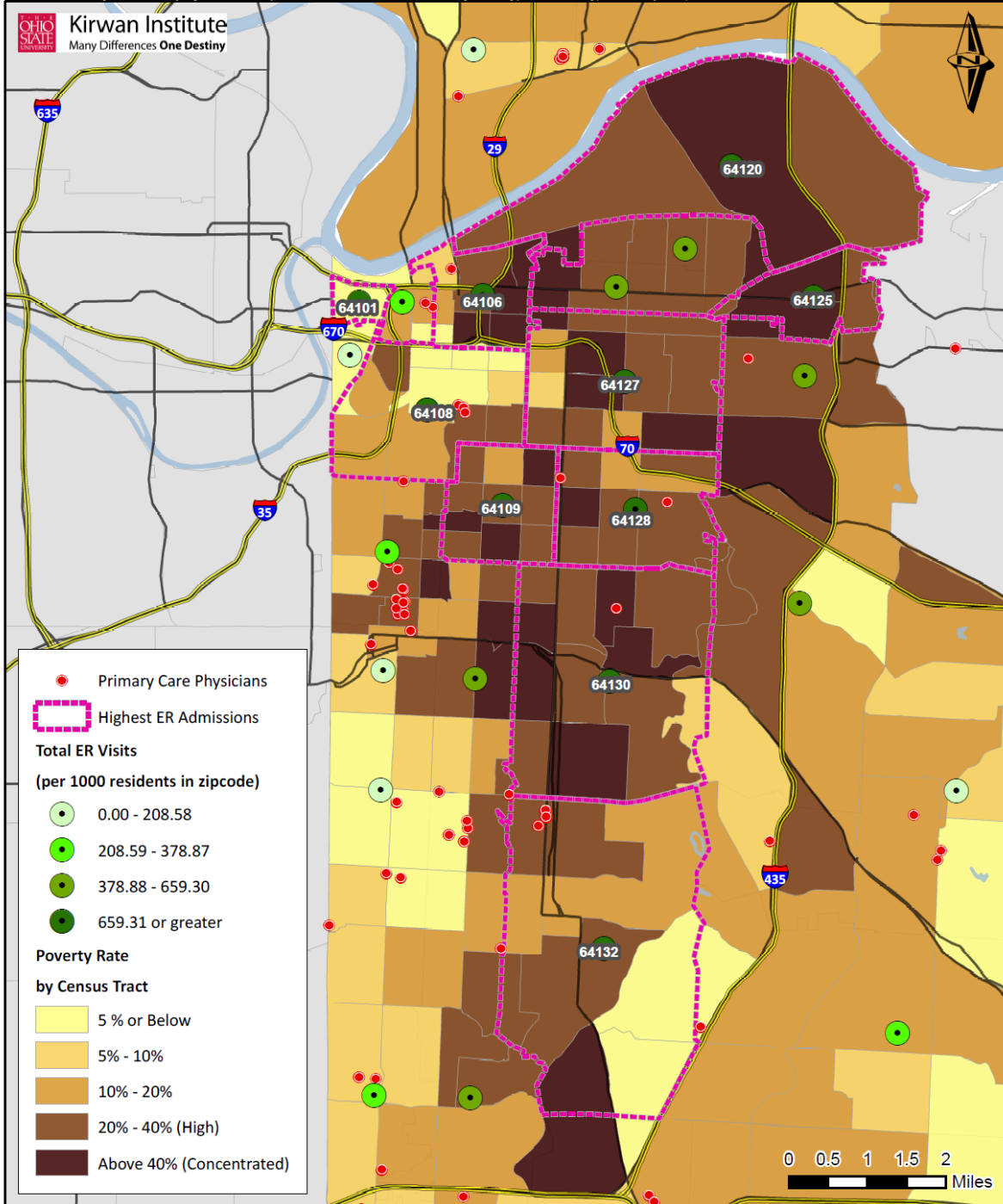


Figure 3. Comparison of primary care physician locations between zip codes with the highest ER admissions and Kansas City. Source. ESRI Business Analyst 2010

Map 1.4 - ER Admissions and Primary Care Physicians (Kansas City, MO)

Highest rate of ER admissions by zip code with primary care physician locations, overlaid by neighborhood poverty rates

Sources- Poverty and Unemployment data (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map Series 2: Preventable Conditions and ER Admissions

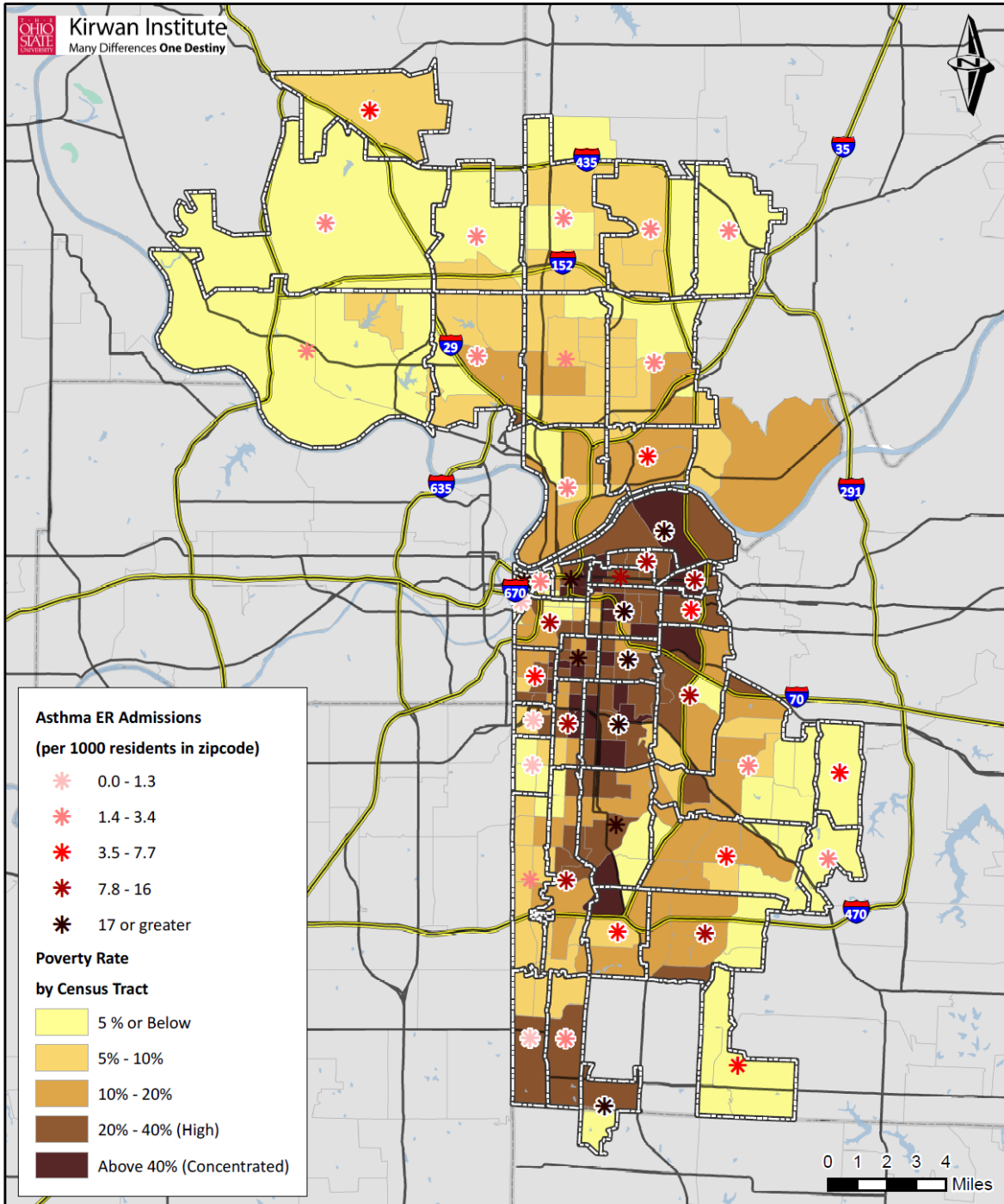
Our analysis of the data received by the Kansas City Health Department shows that Asthma (**Map 2.0**), Influenza (**Map 2.1**), Pneumonia (**Map 2.2**), and COPD (**Map 2.3**) make up the top four chronic or preventable conditions for which people come to the ER. In other words, these are conditions which could better managed through preventative healthcare, which is largely dependent on access to primary care. Having to rely on the ER for care for these conditions likely means that by the time the patient arrives at the ER, the condition is already unnecessarily advanced.

Not surprisingly, these conditions are concentrated in areas of higher poverty, have the highest ER admissions, and cluster near each other. To get a clearer picture, we created maps that show the ten zip codes that have concentrations of at least three of the four conditions, and overlaid this by poverty (**Map 2.4**) and by race (**Map 2.5**). Zip codes 64127, 64130, and 64132 have concentrations of all four, and also have high rates of poverty and non-white populations, indicating that these areas may be of special concern.

Map 2.0 - ER Admissions for Asthma (Kansas City, MO)

Rate of ER admissions for asthma by zipcode, overlaid with neighborhood poverty rates

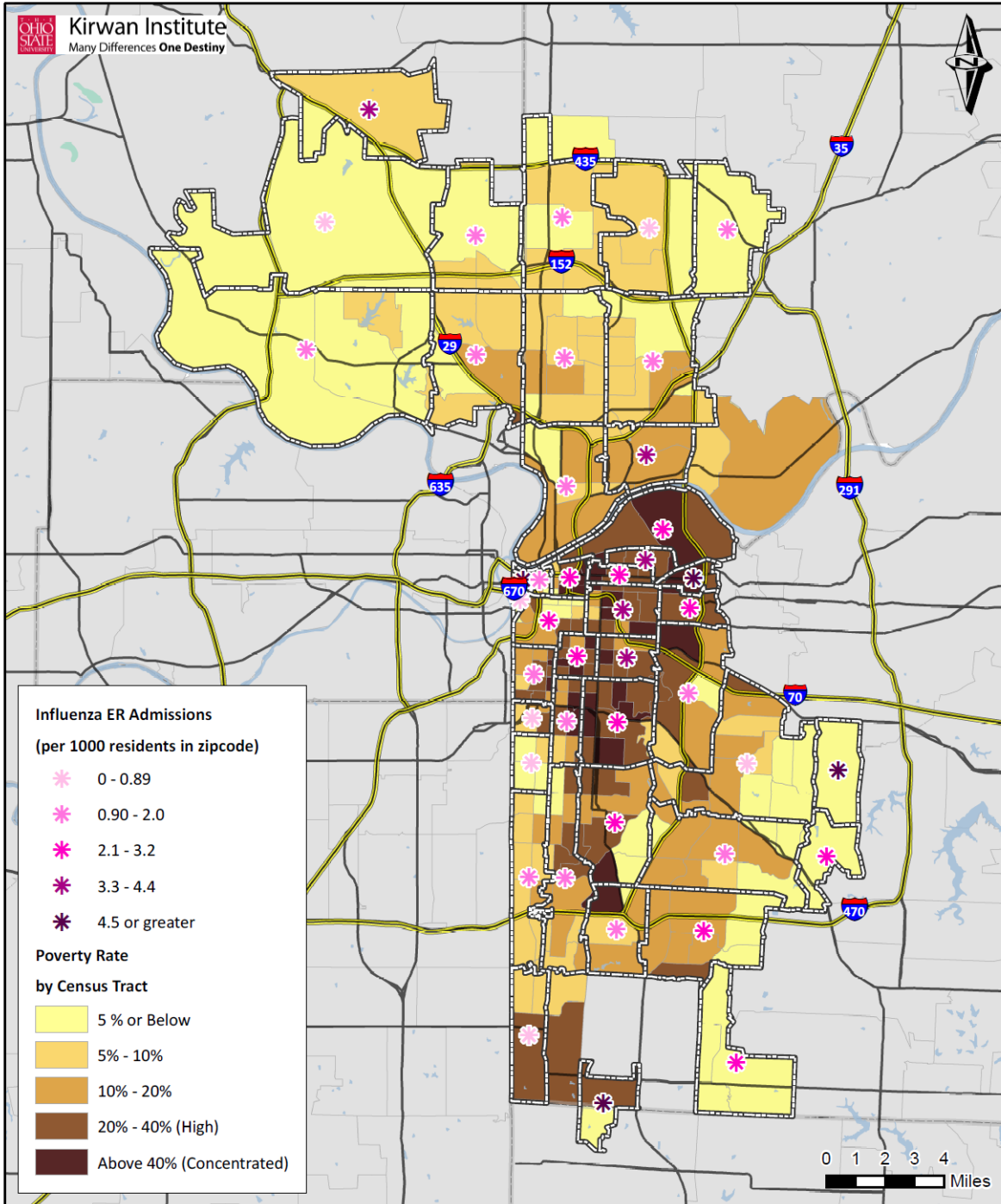
Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 2.1 - ER Admissions for Influenza (Kansas City, MO)

Rate of ER admissions for influenza by zipcode, overlaid with neighborhood poverty rates

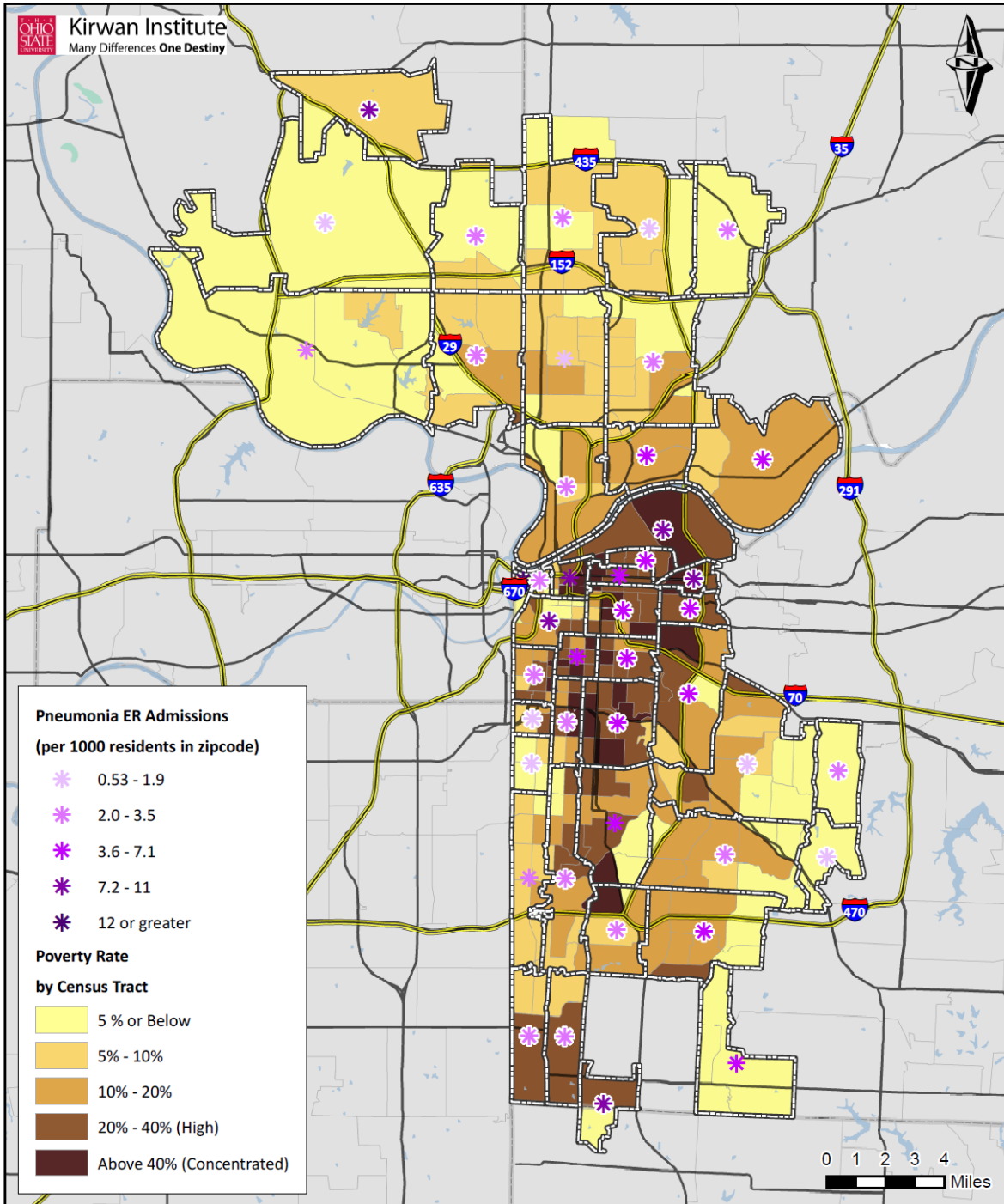
Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 2.2 - ER Admissions for Pneumonia (Kansas City, MO)

Rate of ER admissions for pneumonia by zipcode, overlaid with neighborhood poverty rates

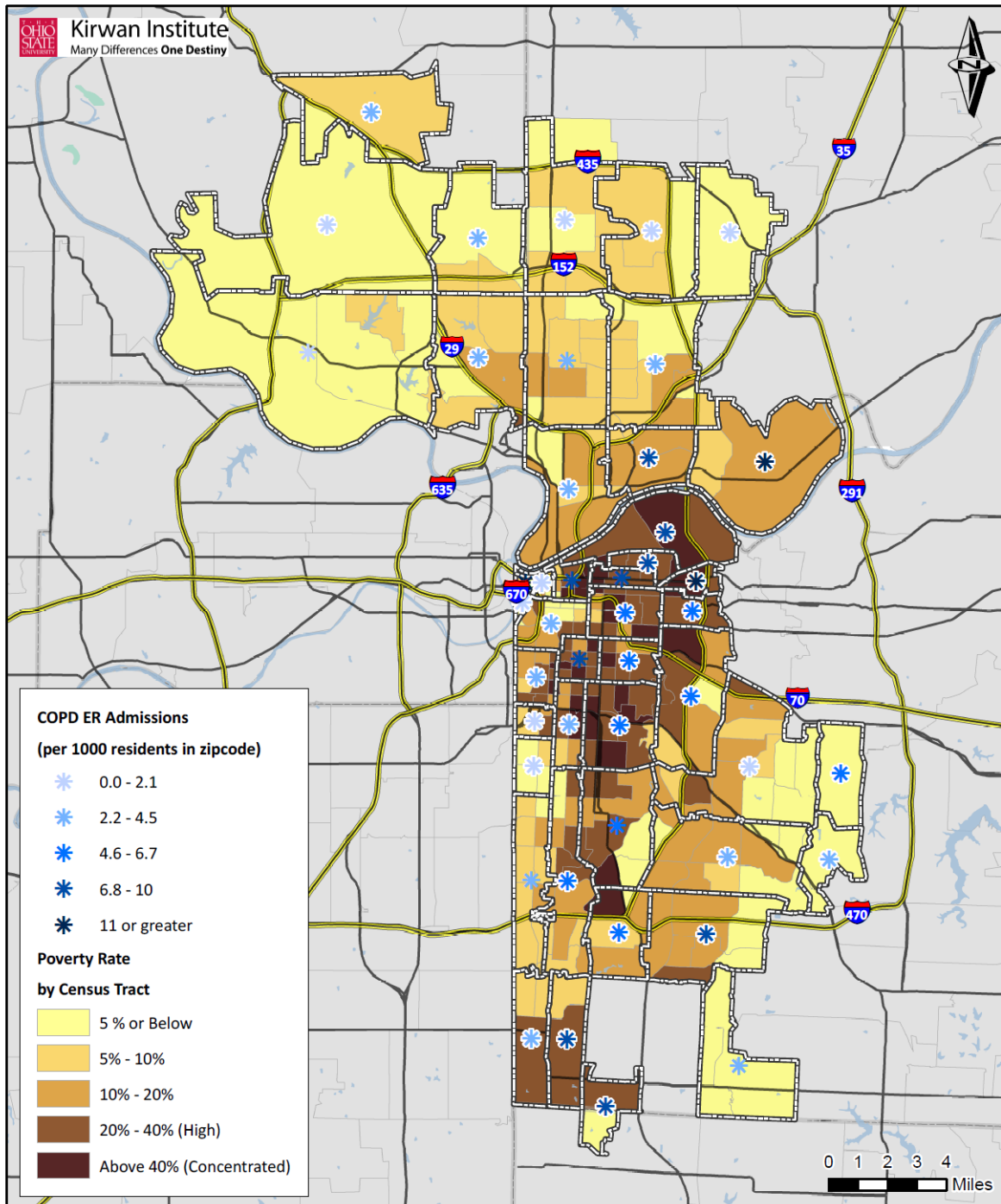
Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 2.3 - ER Admissions for COPD (Kansas City, MO)

Rate of ER admissions for COPD by zipcode, overlaid with neighborhood poverty rates

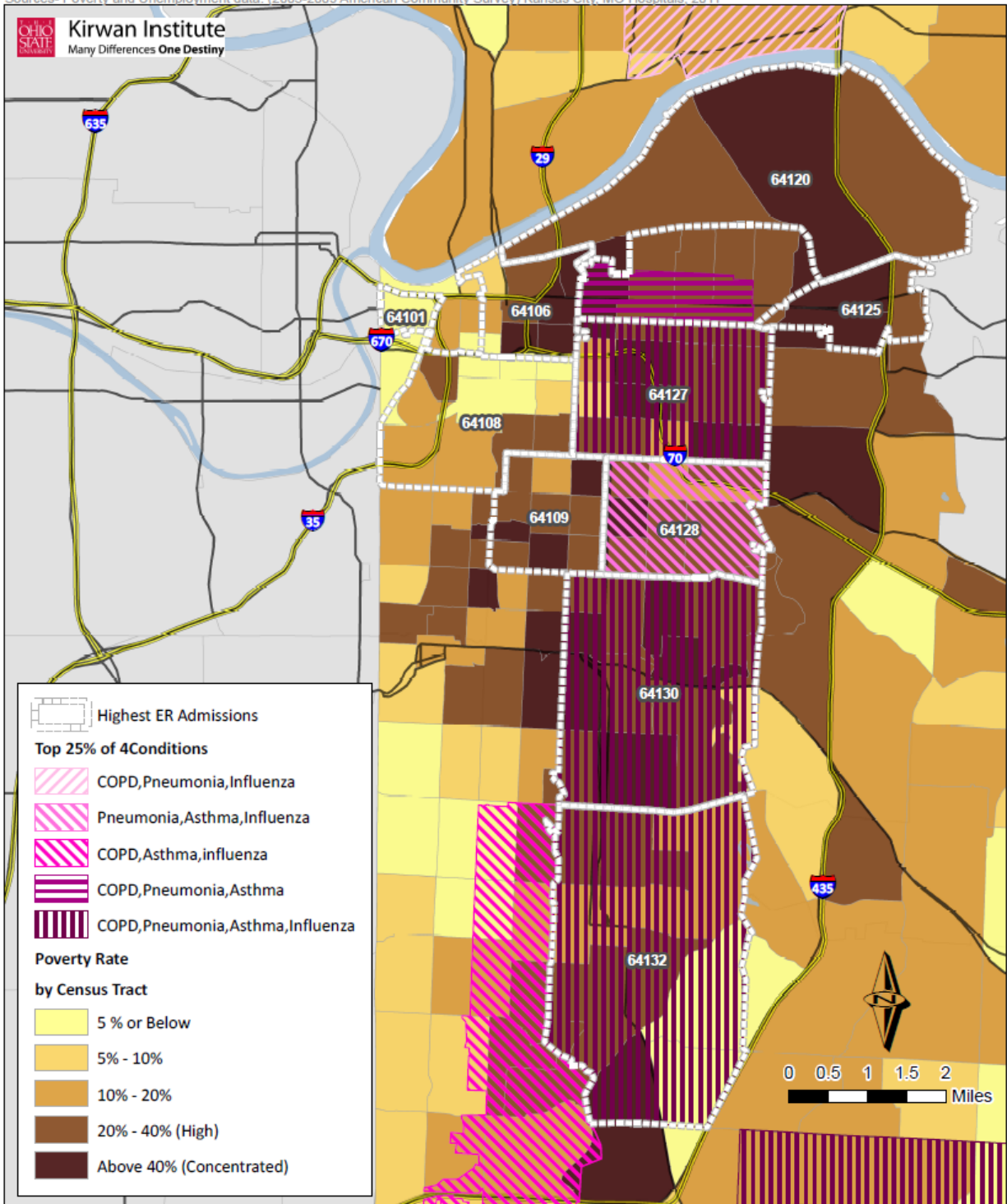
Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 2.4 - ER Admissions and Preventable Conditions (Kansas City, MO)

Highest rate of ER admissions by zip code with the following 4 conditions (COPD, Pneumonia, Asthma, and Influenza) overlaid by neighborhood poverty rates

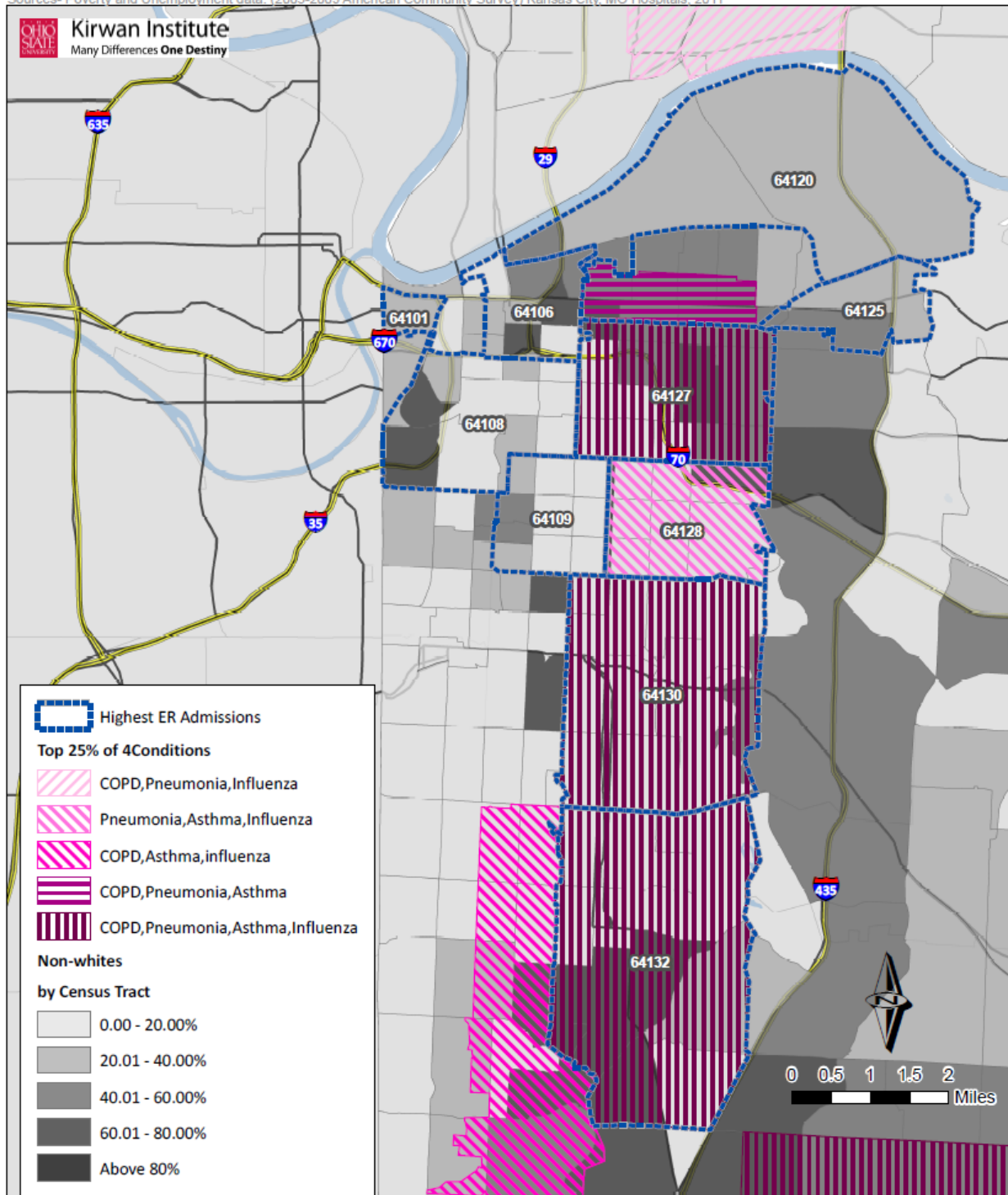
Sources - Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 2.5 - ER Admissions and Preventable Conditions (Kansas City, MO)

Highest rate of ER admissions by zip code with the following 4 conditions (COPD, Pneumonia, Asthma, and Influenza) overlaid by non-white population

Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



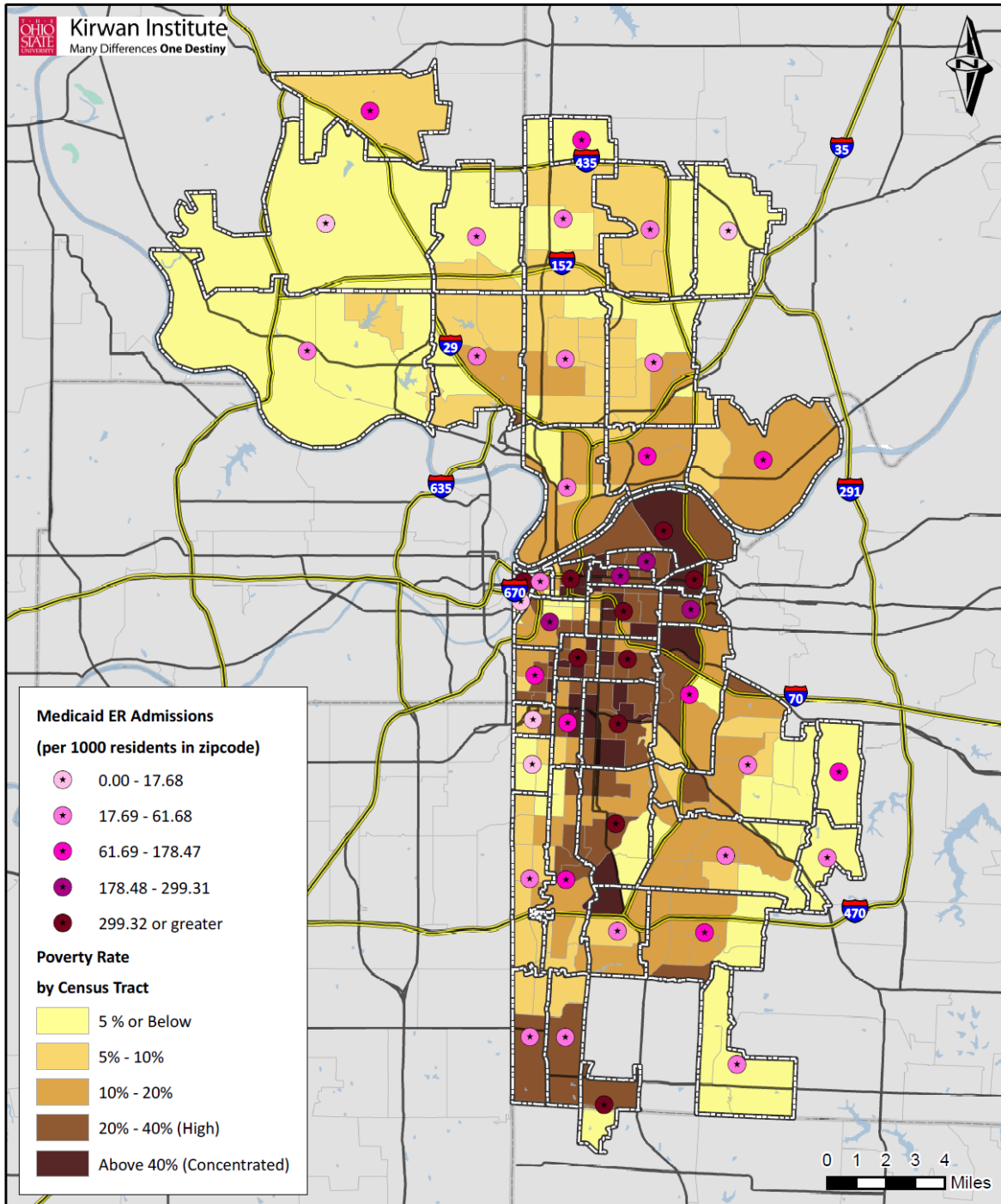
Map Series 3: Insurance Coverage and ER Admissions

Map Series 3 breaks ER admissions down by the type of insurance patients use. There are clear spatial differences in the location of Medicaid, Medicare and charity care admissions in contrast to admissions with primarily public and private insurance. There is higher usage of public or private insurance in the outer areas, which also exhibit lower poverty rates. Conversely, there is much greater reliance on the government programs of Medicare and Medicaid in the inner areas, as well as greater reliance on charity care or one's own money. These areas also have higher poverty rates.

Map 3.0 - ER Admissions and Medicaid (Kansas City, MO)

Rate of ER admissions paying with medicaid by zipcode, overlaid with neighborhood poverty rates

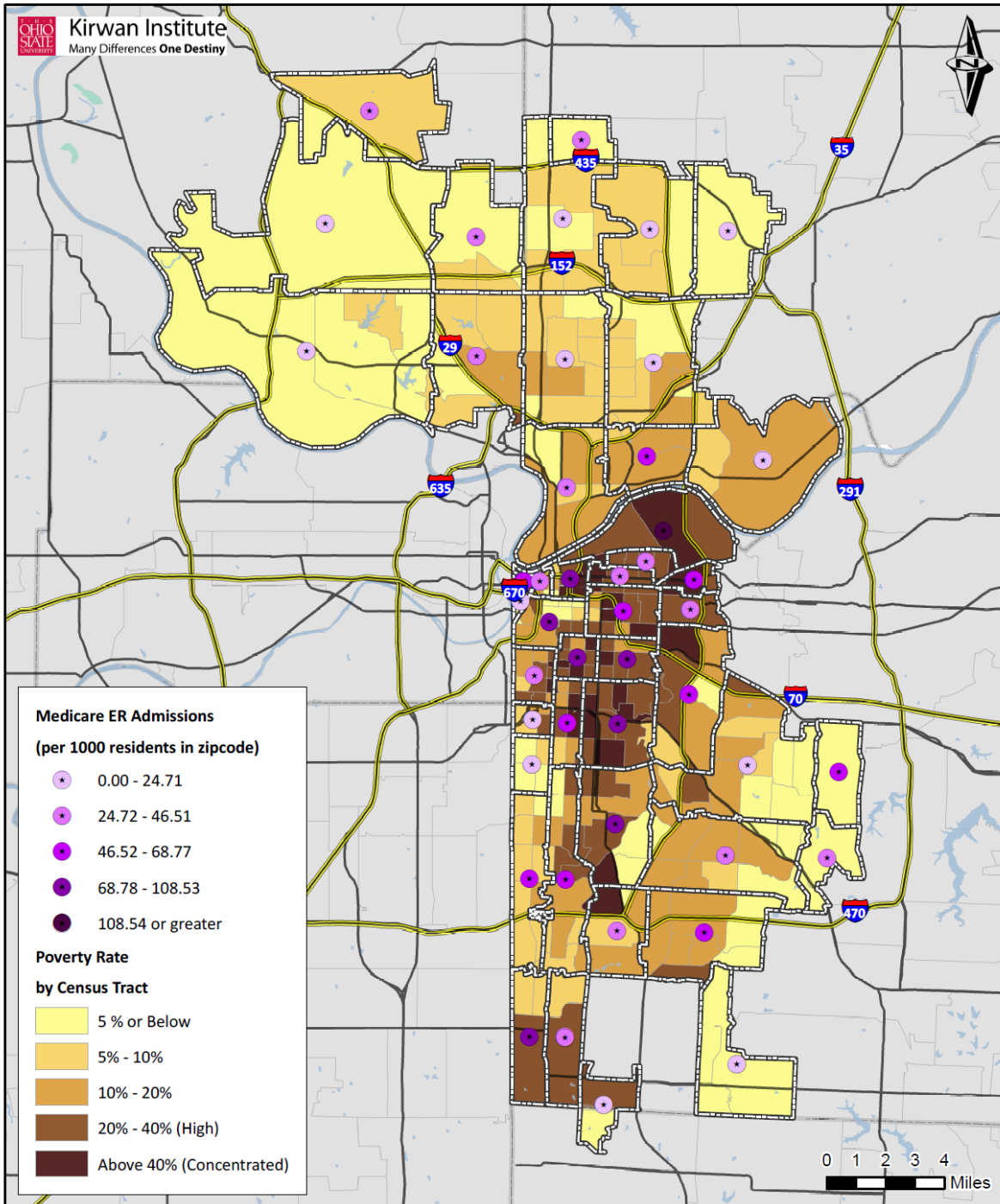
Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 3.1 - ER Admissions and Medicare (Kansas City, MO)

Rate of ER admissions paying with medicare by zipcode, overlaid with neighborhood poverty rates

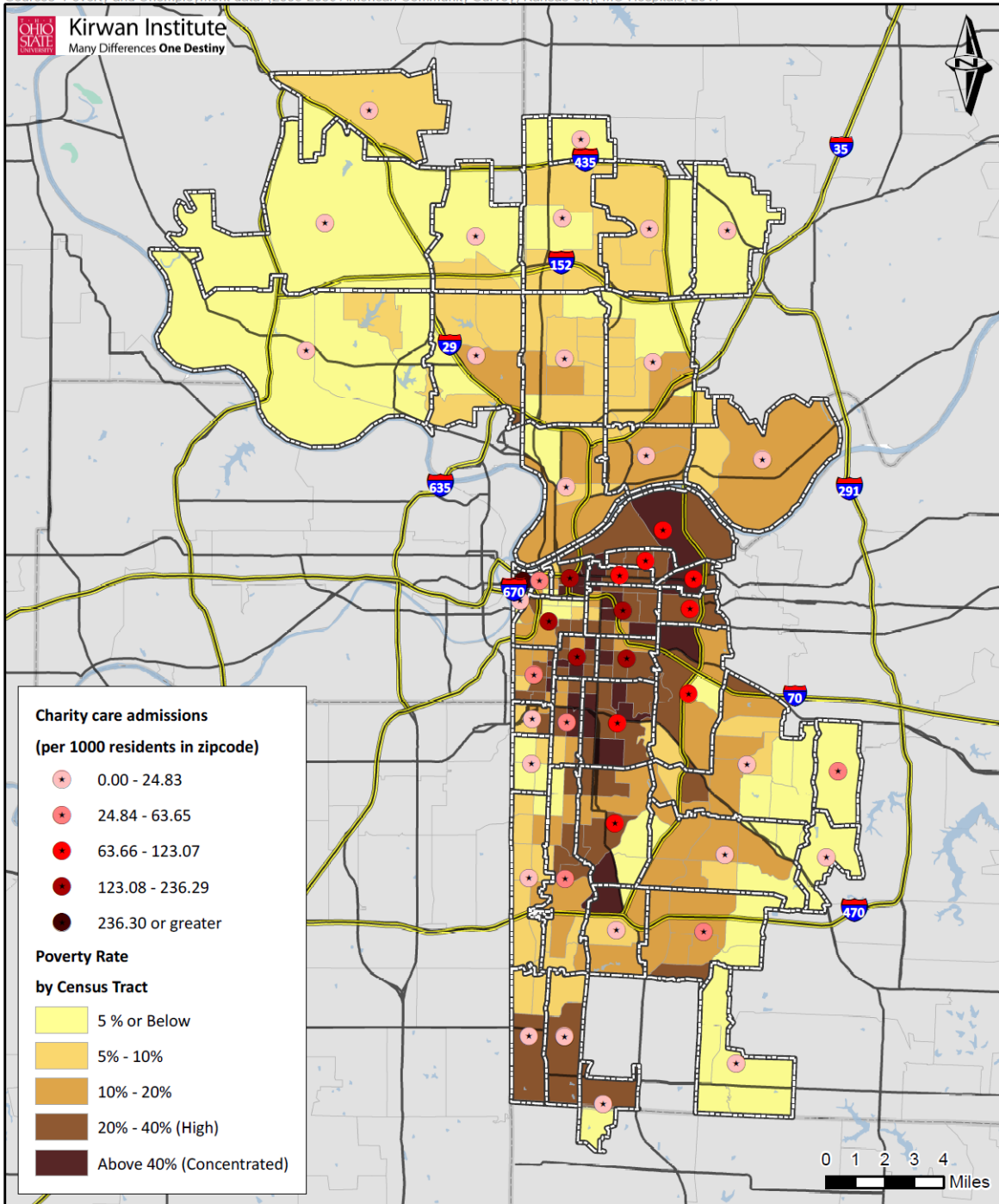
Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 3.2 - ER Admissions and Charity Care (Kansas City, MO)

Rate of ER admissions paying with charity care by zipcode, overlaid with neighborhood poverty rates

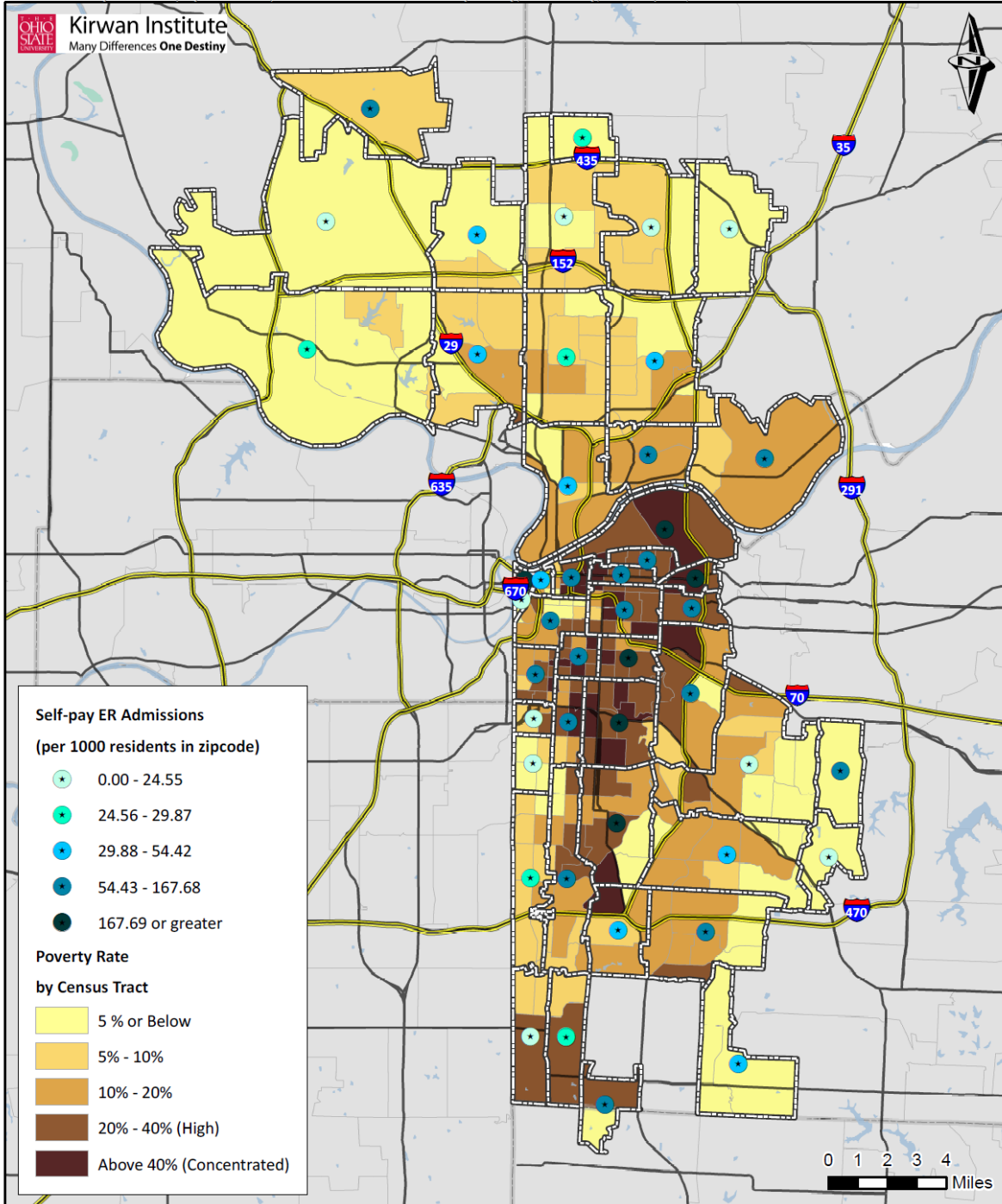
Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 3.3 - ER Admissions and Self-Pay with Poverty Rate

Rate of ER admissions paying with their own money by zipcode, overlaid with neighborhood poverty rates

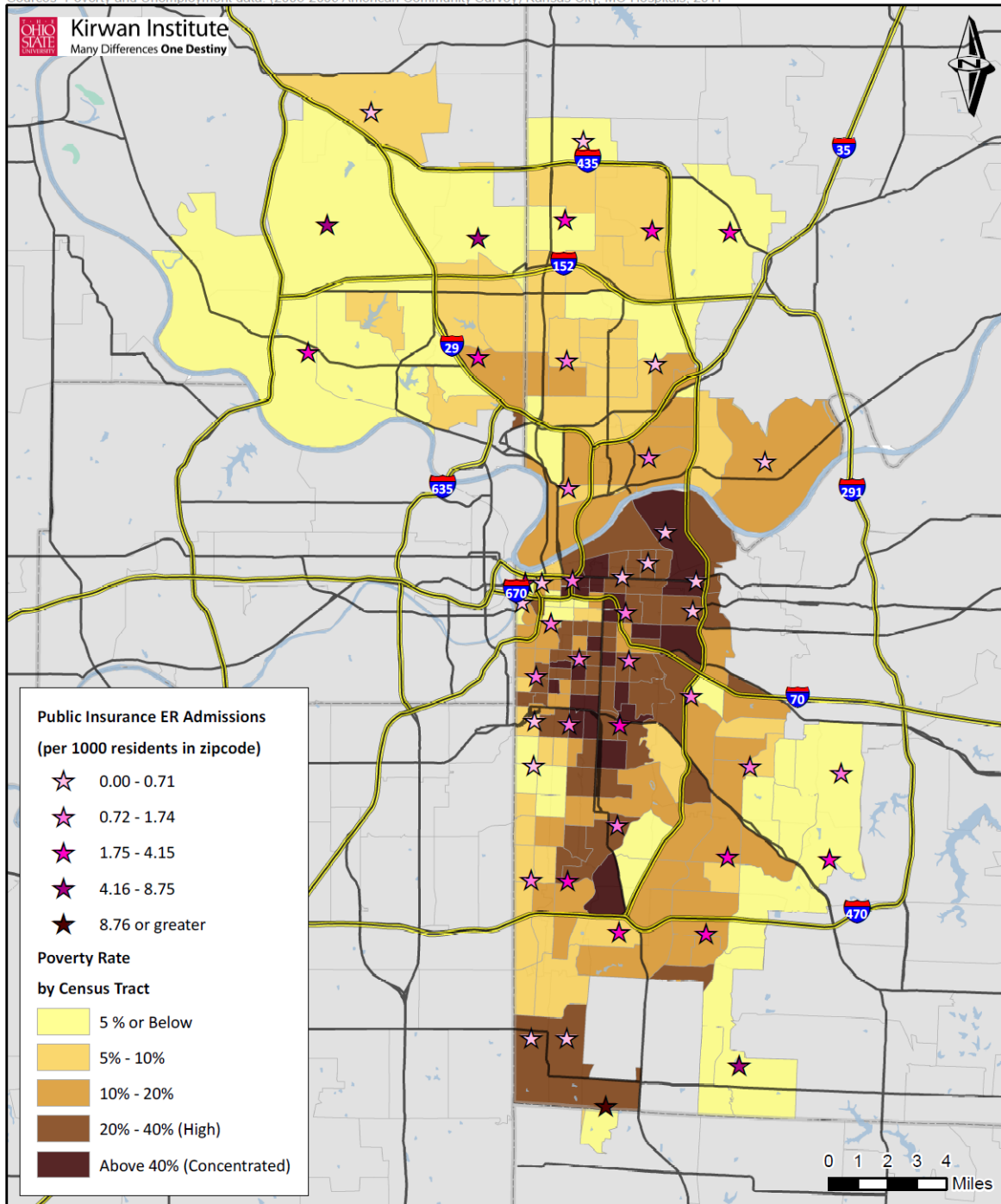
Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 3.4 - ER Admissions and Public Insurance with Poverty Rate

Rate of ER admissions paying with public insurance by zipcode, overlaid with neighborhood poverty rates

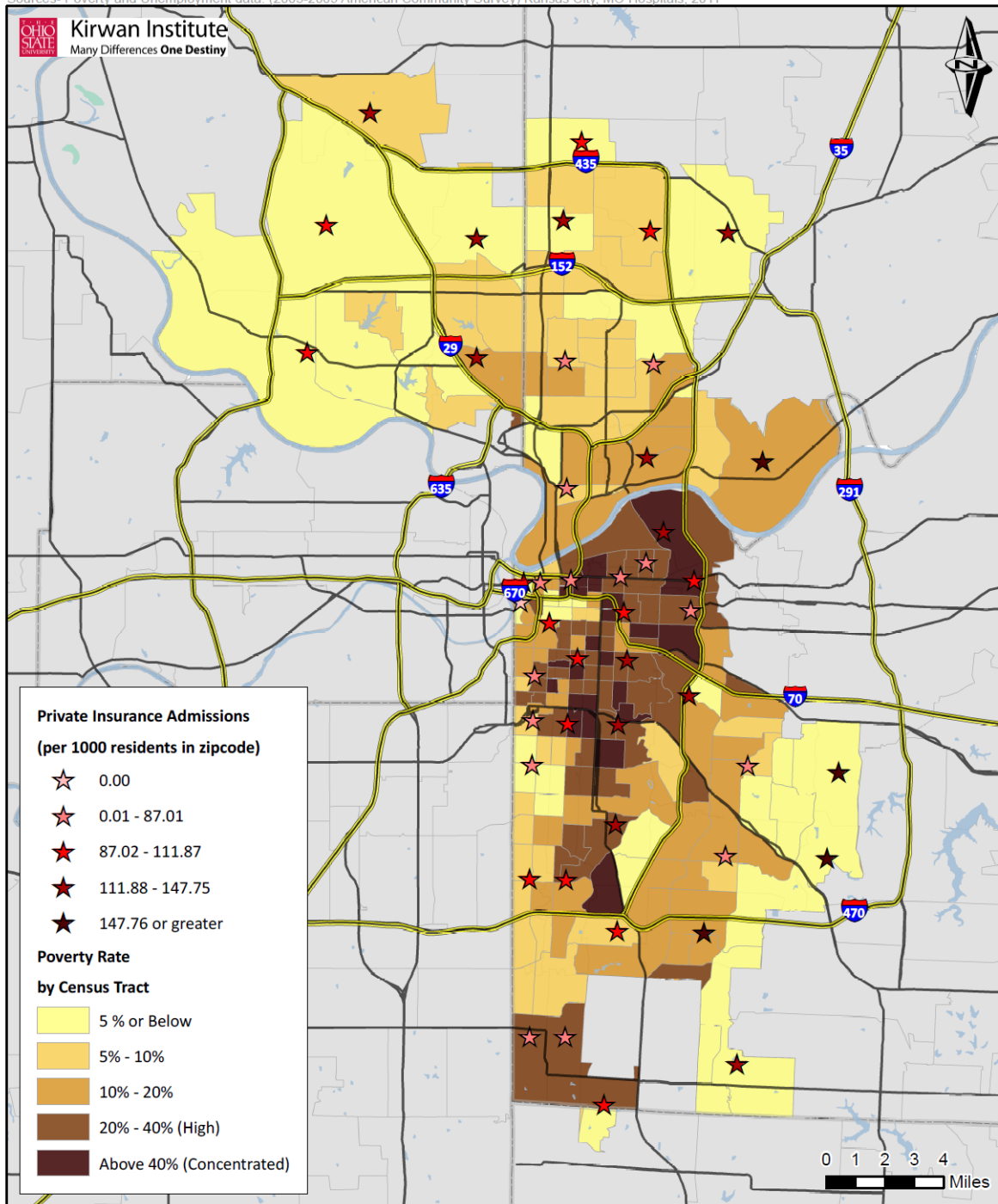
Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Map 3.5 - ER Admissions and Private Insurance with Poverty Rate

Rate of ER admissions paying with private insurance by zipcode, overlaid with neighborhood poverty rates

Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Section II. Cost of High ER Usage and Inaccessible Primary Care

Reliance on the ER for treatment of preventable and chronic conditions is not sustainable, and represents a cost to the system, in terms of ER visit costs, patient admitted costs, and costs to others who have actual emergencies. It also represents a major cost to people in terms of poorer health and shorter life expectancies. Reliance on emergency rooms clearly signals a failure of our health care delivery system, and represents an ineffective use of limited health care dollars that does not serve anyone in the system well, from patients to ER doctors to the state.

In the coming years, we can expect rising health care costs to become an even more critical issue. One of the most immediate issues is the expansion in Medicaid that will result from the passage of the Patient Protection and Affordable Care Act. Although the ACA provides \$434 billion for the expansion of Medicaid, this covers only a portion of the costs associated with the expansion, the rest will be left to the states to fund, states that are already struggling with large budget deficits. Medicaid reimbursement rates already fall below private insurance and Medicare. For example, in 2008, Medicaid reimbursement rates in Missouri averaged 72% of Medicare.¹ As the state struggles to balance the increased costs associated with the expansion in Medicaid, the result may be further cuts to reimbursement and a decrease in primary care physicians that accept Medicaid patients, leaving these patients only one option: the ER.

While Medicaid coverage is an improvement over no coverage at all, it does not mean that patients using Medicaid can expect drastically improved access to primary care. In fact, some research anticipates that this expansion of Medicaid will actually increase the use of ER care. One study estimates that these changes will generate 65 million ER visits, nationally.² A 2007 national survey on ER use found that Medicaid enrollees utilized ER care at twice the rate of uninsured or privately covered patients.³

In 2009, The Commonwealth Fund released State scorecards on health system performances, which ranks states based on thirty-eight indicators of access, quality, costs, and health outcomes. Missouri ranked 36th.⁴ Such a ranking incurs substantial costs. For example, if Missouri improved its performance to the level of the best-performing state for preventable hospital admissions, the state could save \$121,583,988.⁵ Likewise, if the state improved its performance on hospital readmissions to the level of the best-performing state, Missouri could save \$60,230,053.⁶

Further research is needed to explore the cost ramifications for the ER “hot spots” in Kansas City, and assess how improvements in health care access can empower communities to recapture limited health care resources and redirect it into the community to improve health outcomes.

Section III. Opportunity, Place, and Health Outcomes

Health is more than health care. It not only reflects personal choices about healthy habits, or access to primary care, but is significantly impacted by where one lives. The ER case studies and maps illustrate this geography of health opportunity in the region. Although equitable access to quality health care remains an unrealized promise and a key determinant of health, social factors like poverty, unemployment, housing, education, and the food system collectively exert an equally important, maybe even greater, impact on health. Second, health is local, or, better yet, regional. Whites and racial minorities experience starkly different neighborhood contexts, which result in different exposures to “positive” factors, such as resources and services, as well as “negative” factors, like violence and environmental toxins. Put another way, irrespective of factors like personal motivation to be healthy or access to a primary care provider, where one lives exerts a strong, independent effect on health by determining access to opportunity structures. This is in part why we can identify ER “hot spots.”

Consider the illustration⁷ below as a simple model of the “determinants” of health:

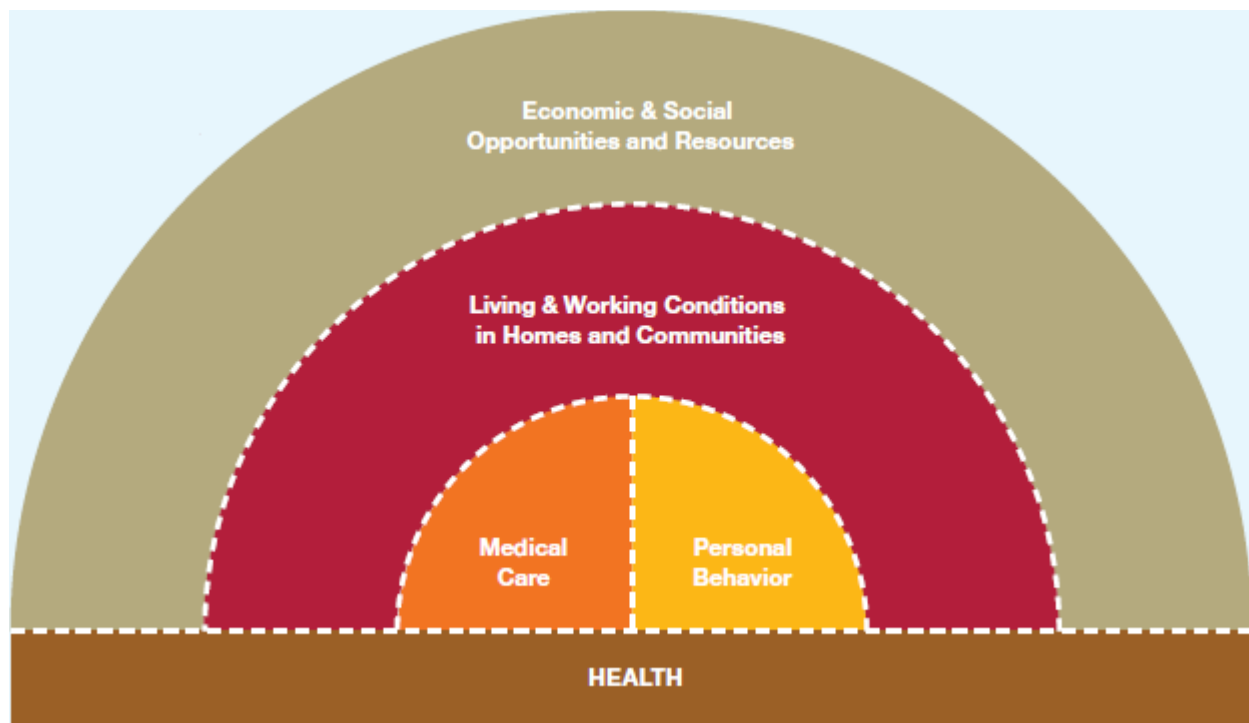


Figure 4. The Determinants of Health. Source: Robert Woods Johnson Foundation.

As the figure indicates, although access to health care services and individual behavior play important roles in determining health, one’s immediate environment and access to opportunity structures are significantly more important.

The maps in Map Series 4 through Maps 5, 6, 7, and 8 describe environmental and social health in the community. From the outset of this project, we suspected that areas with high ER admissions, especially for preventable conditions, are an indication that these neighborhoods are facing structural elements, beyond the ER and even the healthcare system, that are impacting the health of the people who live there.

Map Series 4: Food Access and ER Admissions

We know having access to healthy food goes a long way in promoting good health outcomes. We also know that healthy food is not distributed equally among neighborhoods. Map Series 4 examines those zip codes that have the highest ER admissions and to what food sources these areas have access.

For example, **Map 4.0** shows grocery store locations in the zip codes with the highest ER admissions. In some zip codes, there are practically no locations. For example, zip code 64130 shows one grocery store within its boundaries, and one on the boundary.

Map 4.1 shows corner store locations in the zip codes with the highest ER admissions. Comparing **Maps 4.0** and **4.1**, we can see some areas have much greater access to corner stores, which generally do not stock healthy food, than to grocery stores. For example, zip code 64130 appears to have much greater access to corner stores than to grocery stores.

Figure 5 provides a comparison of the different food sources between the “hot spot” zip codes and the city. As shown, two of the zip codes (64101 and 64120) have only access to corner stores. Very few of the “hot spot” zip codes have access to farmers markets, which frequently provide the freshest food available.

Food Access Analysis for "hot spot" zip codes and Kansas City

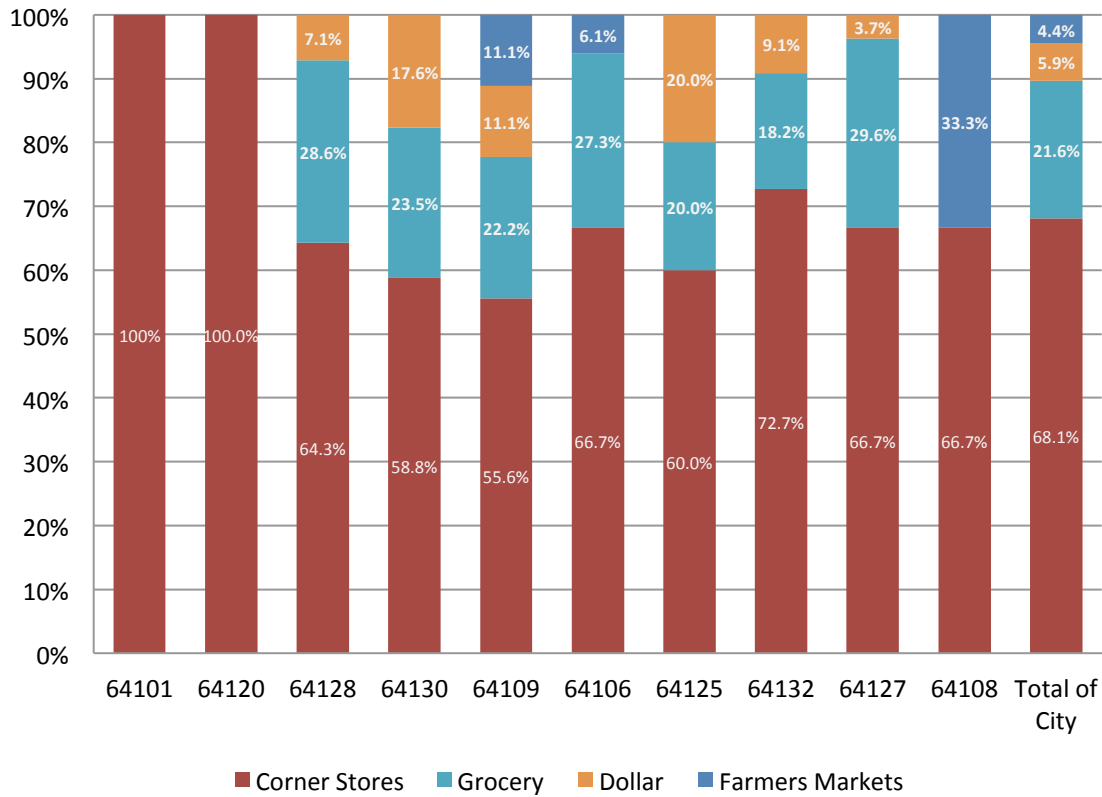
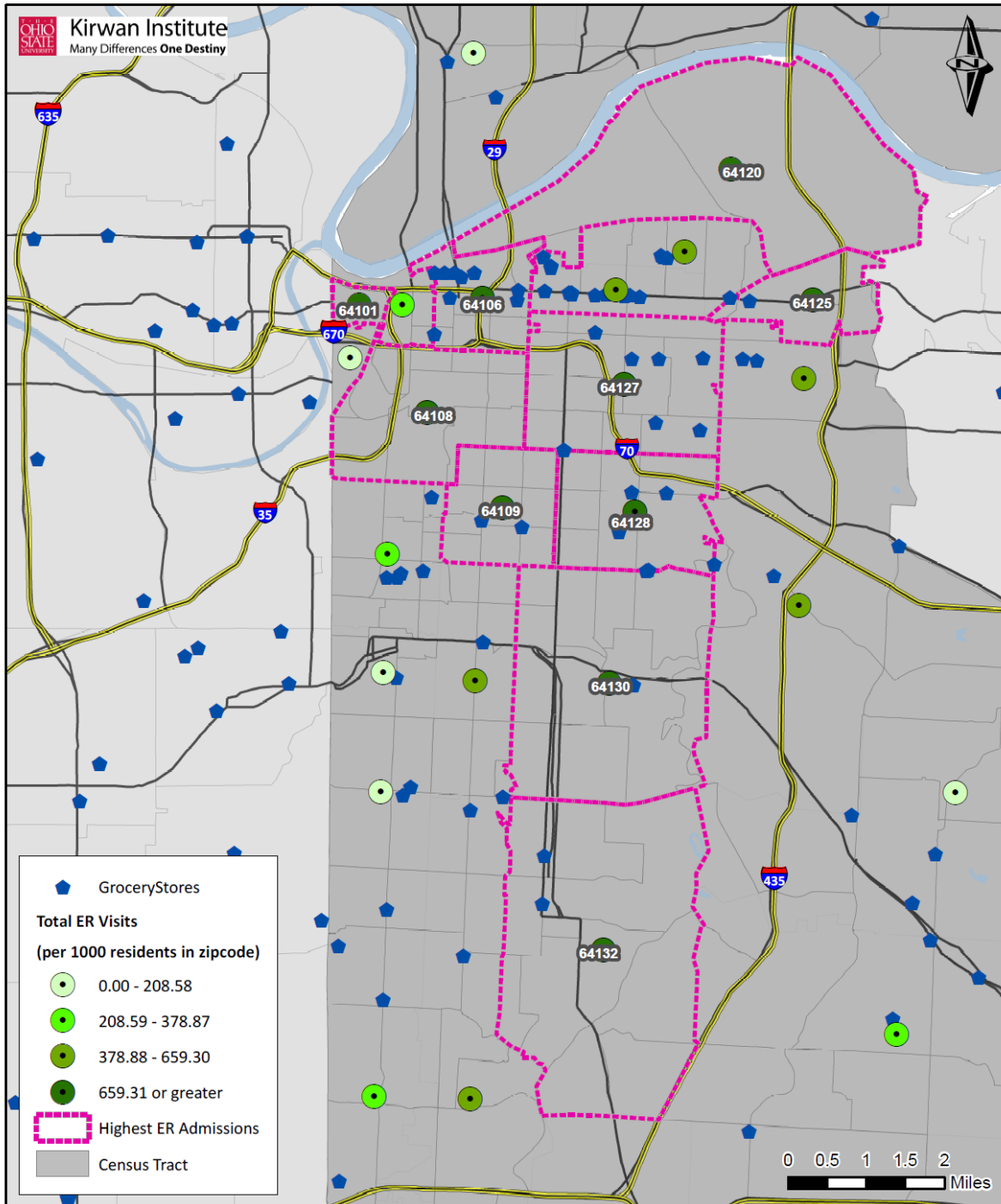


Figure 5. Comparison of food access between zip codes with the highest ER admissions and Kansas City. Source. Mid American Regional Council 2010

Map 4.0 - ER Admissions and Grocery Store Locations(Kansas City, MO)

Highest rate of ER admissions by zip code, overlaid with grocery store locations

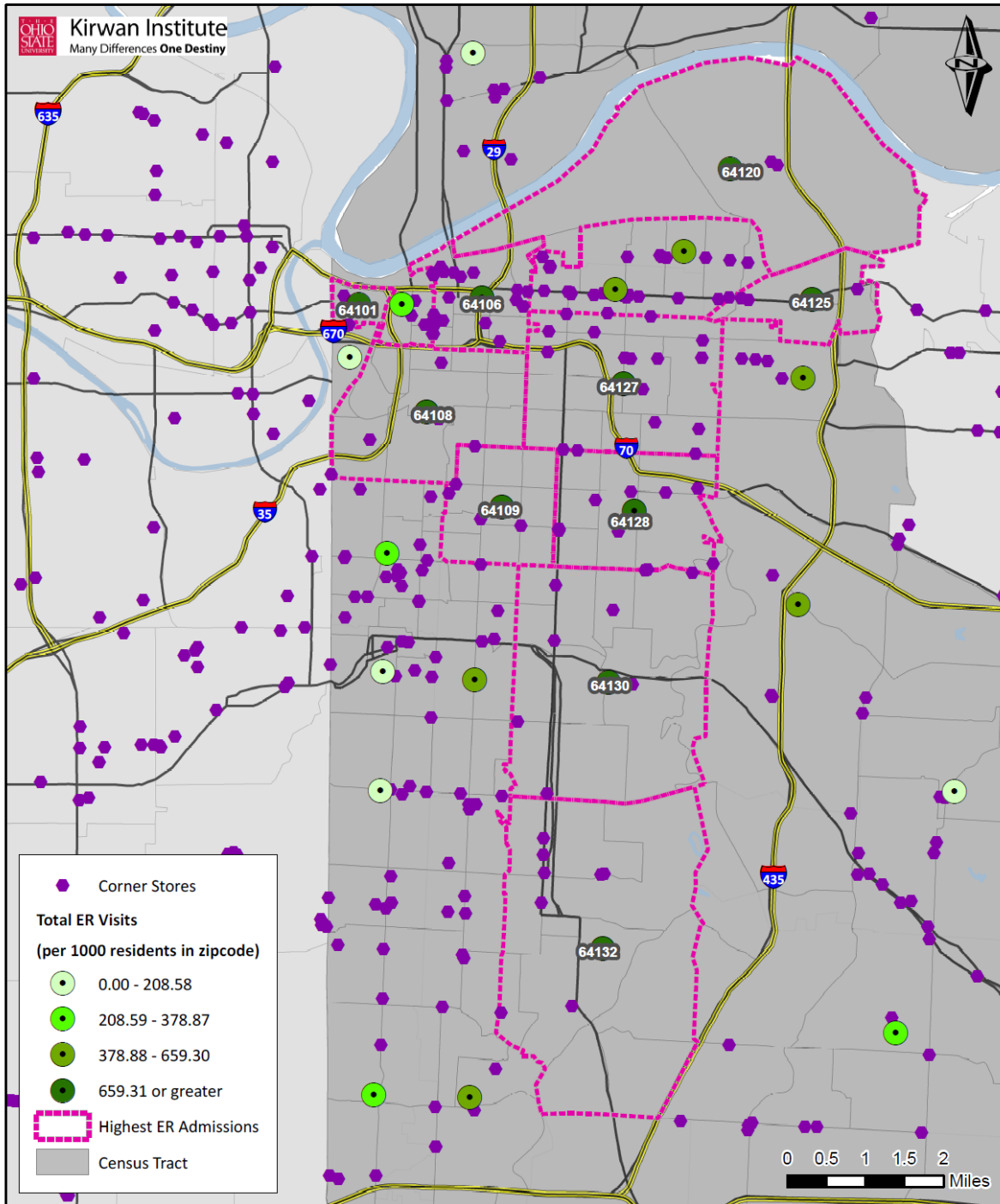
Sources- U.S. Postal Service 2010, MO Hospitals, 2011,



Map 4.1 - ER Admissions and Corner Store Locations(Kansas City, MO)

Highest rate of ER admissions by zip code, overlaid with corner store locations

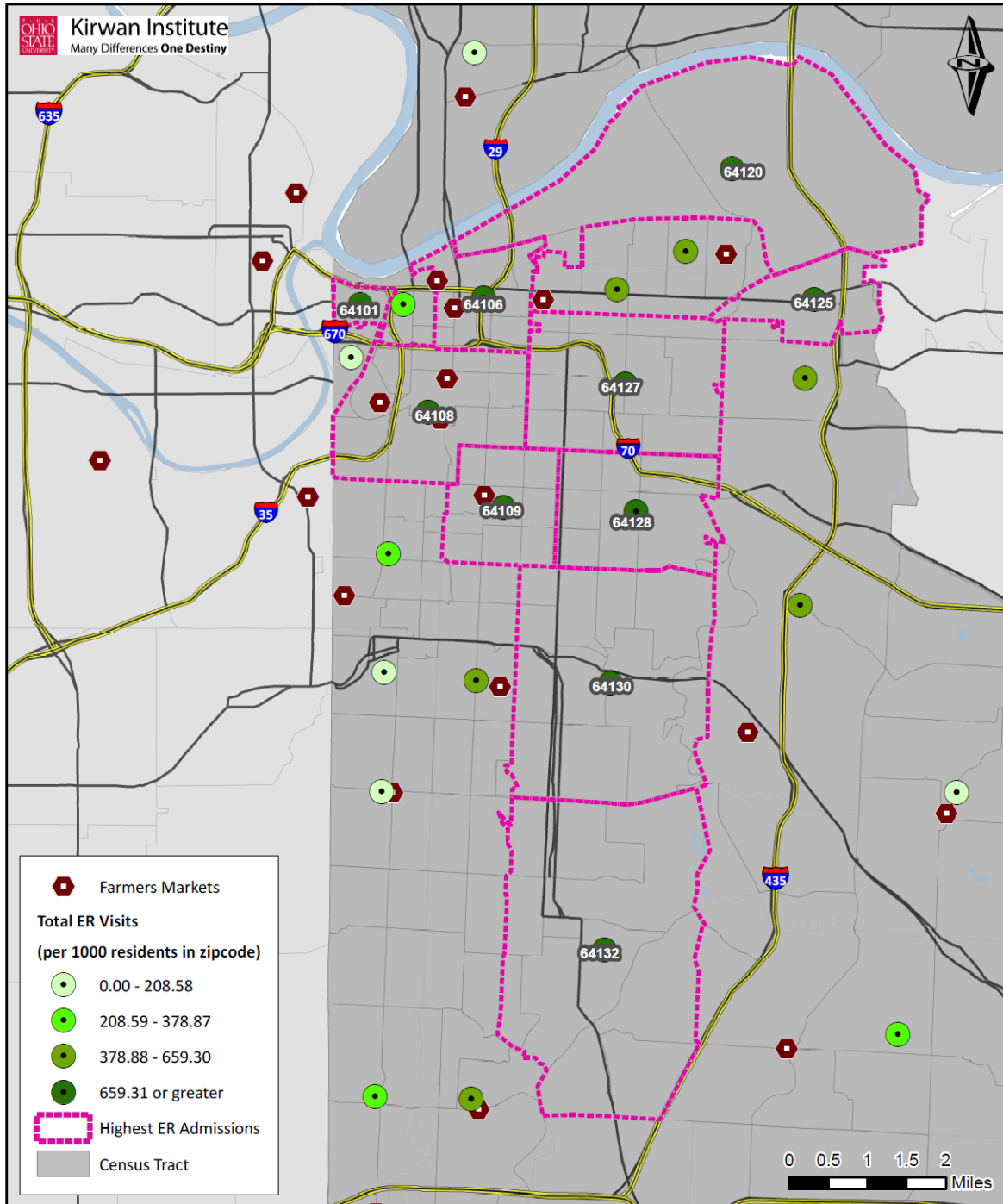
Sources- U.S. Postal Service 2010, MO Hospitals, 2011,



Map 4.2 - ER Admissions and Farmers Market Locations(Kansas City, MO)

Highest rate of ER admissions by zip code, overlaid with farmers market locations

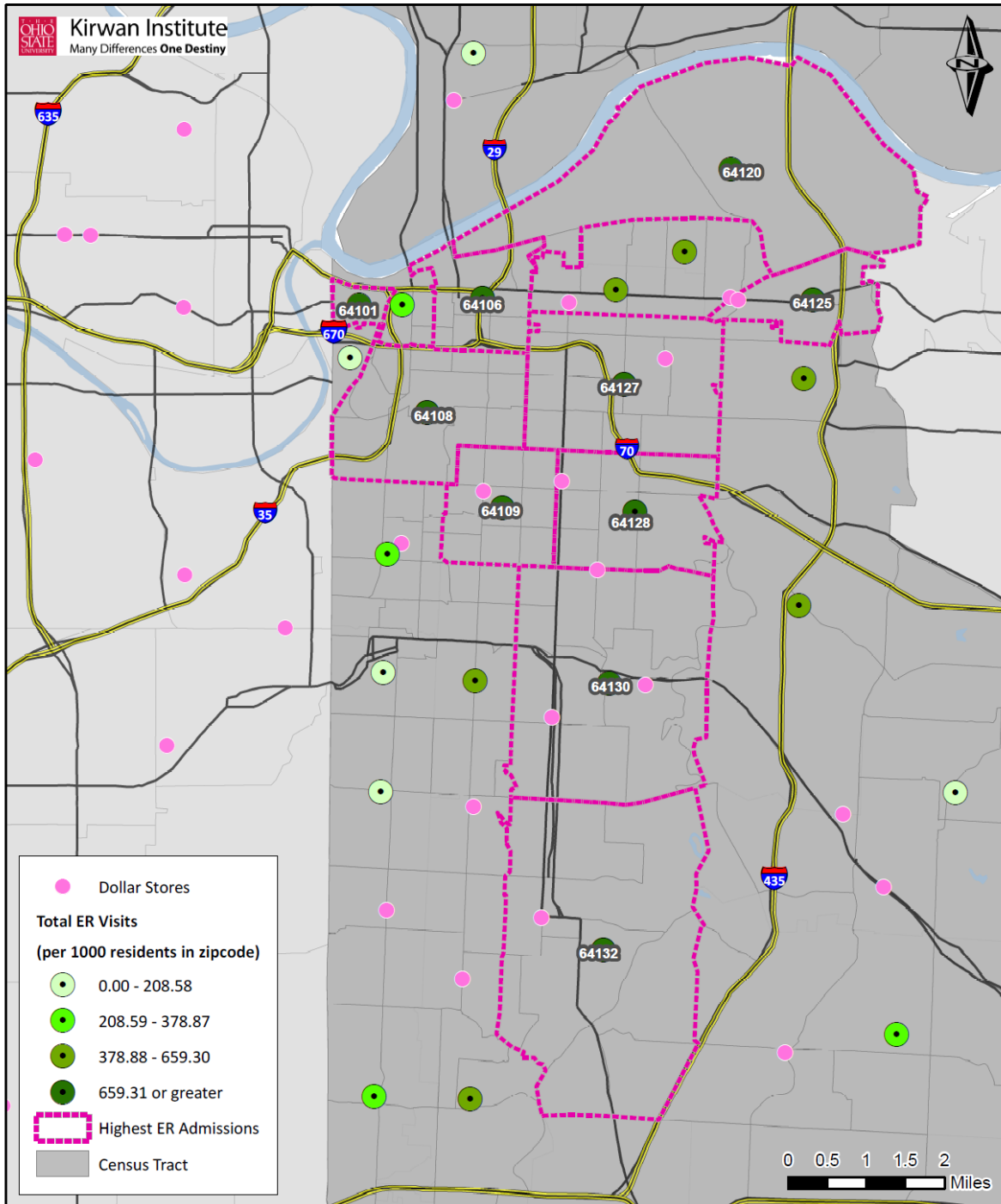
Sources- U.S. Postal Service 2010, MO Hospitals, 2011,



Map 4.3 - ER Admissions and Dollar Store Locations(Kansas City, MO)

Highest rate of ER admissions by zip code, overlaid with dollar store locations

Sources- U.S. Postal Service 2010, MO Hospitals, 2011,



Map 5.0: Unemployment and ER Admissions

Map 5.0 shows the unemployment rate for the zip codes that have the highest ER admissions. Zip codes with some of the highest unemployment rates, above 35%, also have some of the highest ER admissions. Overall, the “hot spot” zip codes have an unemployment rate of 24%, compared to the 14% unemployment rate of Kansas City (**Figure 6**).

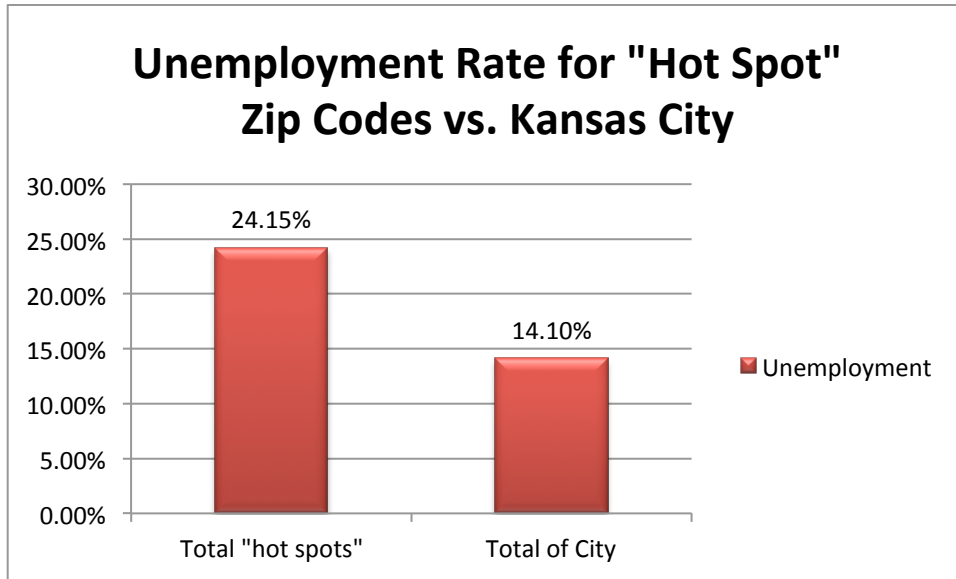
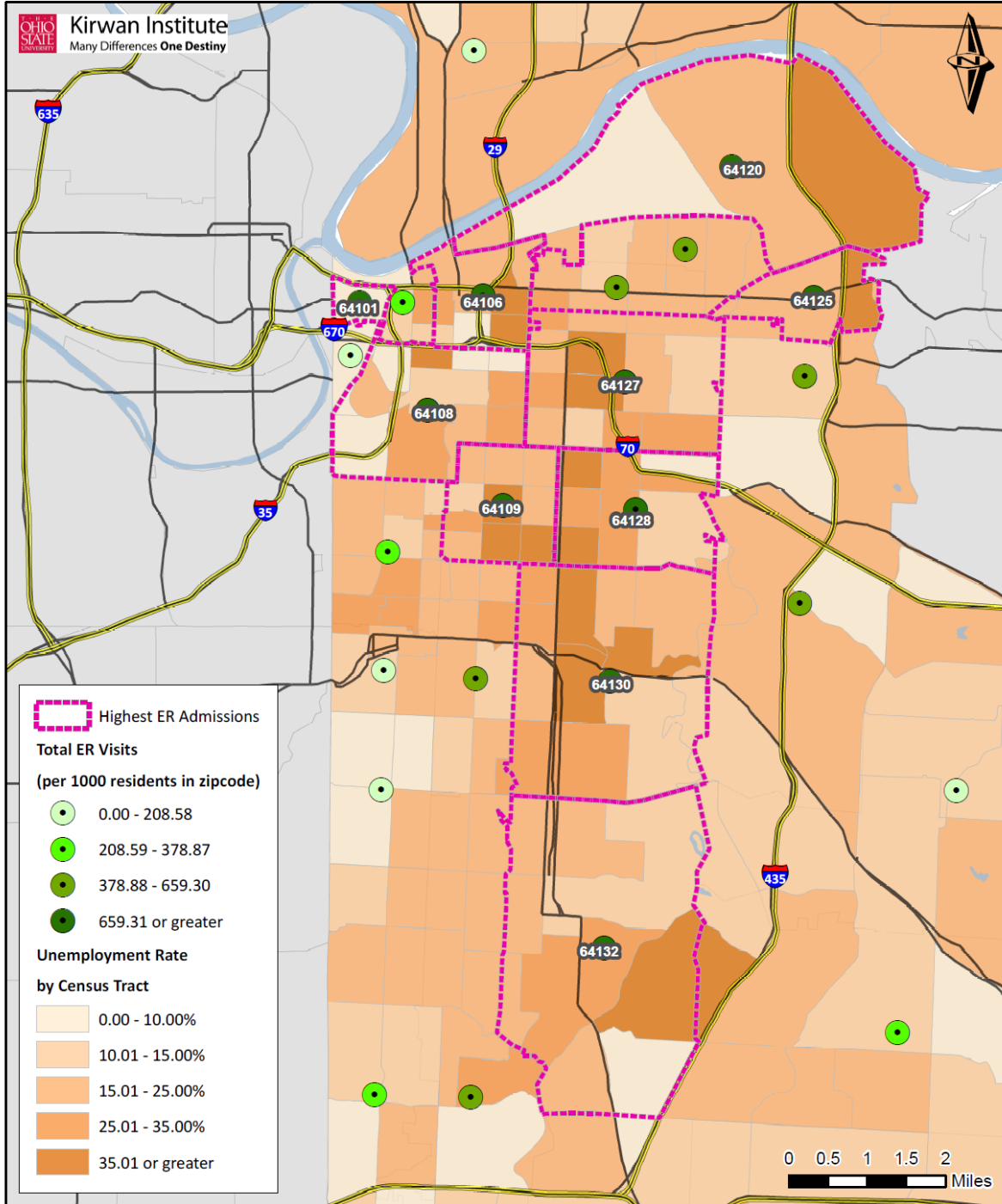


Figure 6. Comparison between unemployment rates in the zip codes with the highest ER admissions and Kansas City. Source: American Community Survey 2005-2009

Map 5.0 - ER Admissions and Unemployment (Kansas City, MO)

Highest number of ER admissions by zip code, overlaid with neighborhood unemployment rates

Sources- U.S. Postal Service 2010, MO Hospitals, 2011,



Map 6.0: Vacancy Rates and ER admissions

Map 6.0 shows that those zip codes that have higher ER admission rates also generally have higher vacancy rates. In fact, the “hot spot” zip codes have a vacancy rate more than double that of the city as a whole (Figure 7).

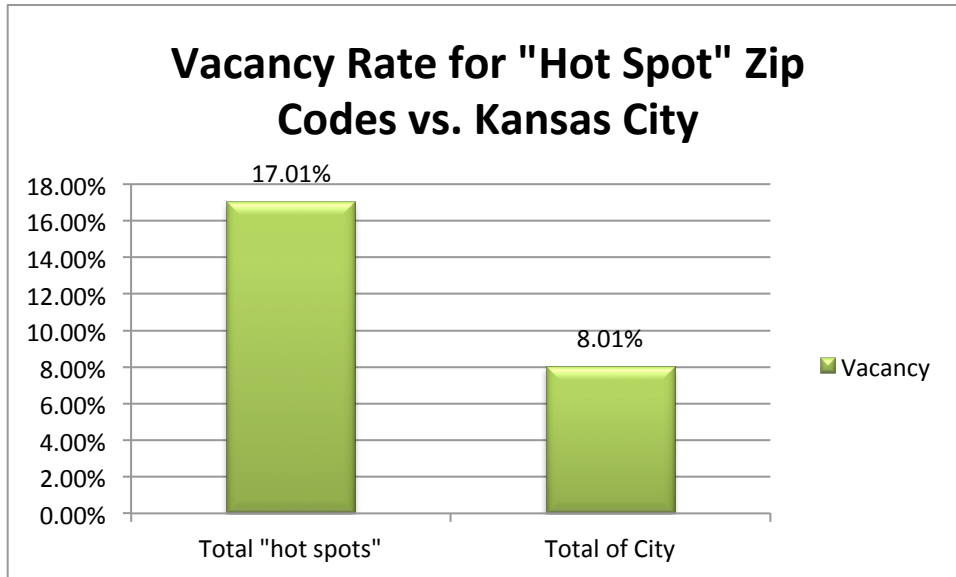
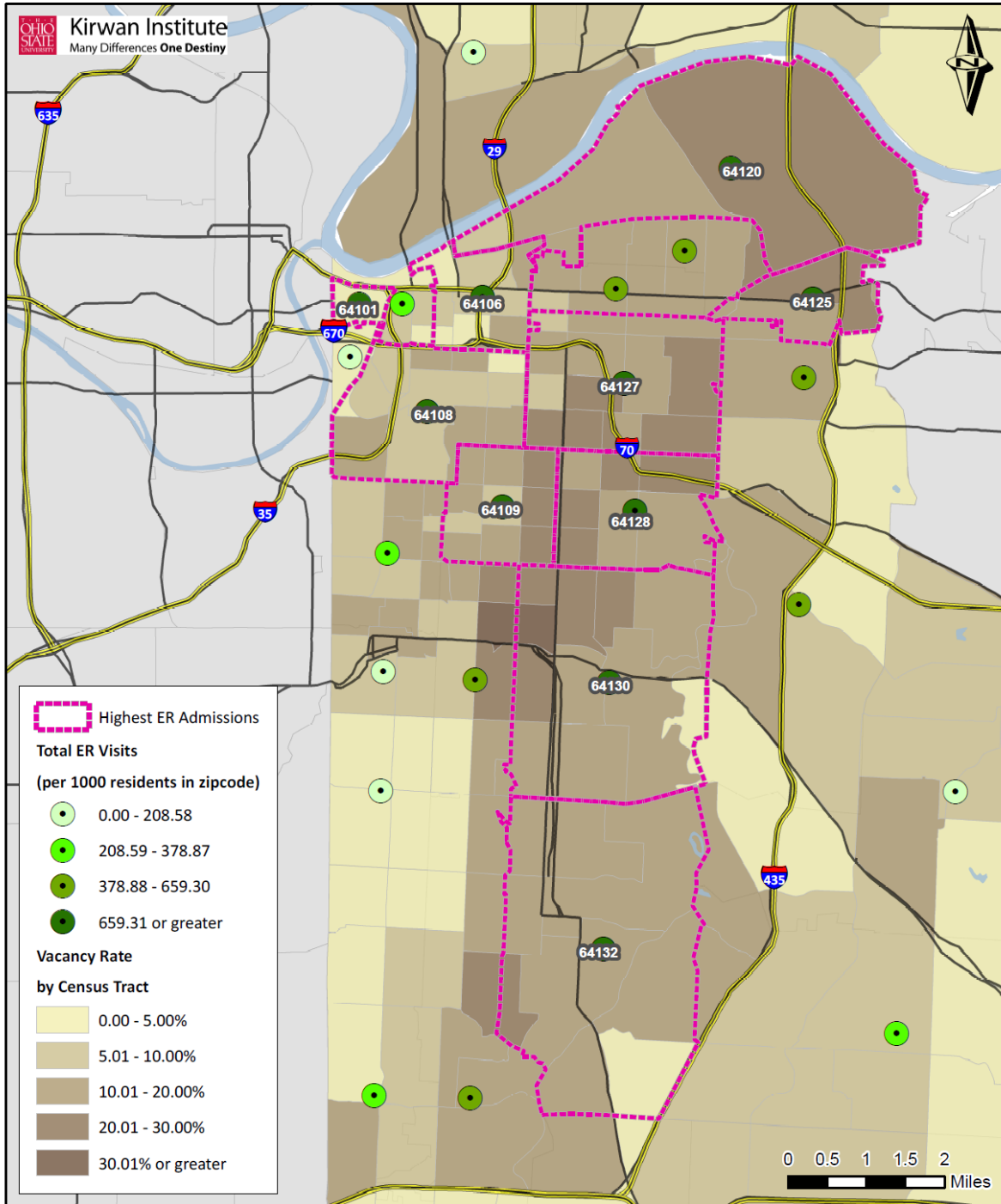


Figure 7. Comparison between vacancy rates for zip codes with the highest ER admissions and Kansas City. Source: American Community Survey 2005-2009

Map 6.0 - ER Admissions and Vacancy (Kansas City, MO)

Highest number of ER admissions by zip code, overlaid with neighborhood vacancy rates

Sources- U.S. Postal Service 2010, MO Hospitals, 2011,



Map 7.0: Infant Mortality and ER Admissions

Map 7.0 illustrates the cumulative impact of poor health, social, and environmental conditions. The quality of these conditions is a matter of life and death. In this map, we can see that those zip codes that have the highest ER admissions also have high infant mortality rates. Zip codes 64127, 64130, and 64132 have especially troubling rates.

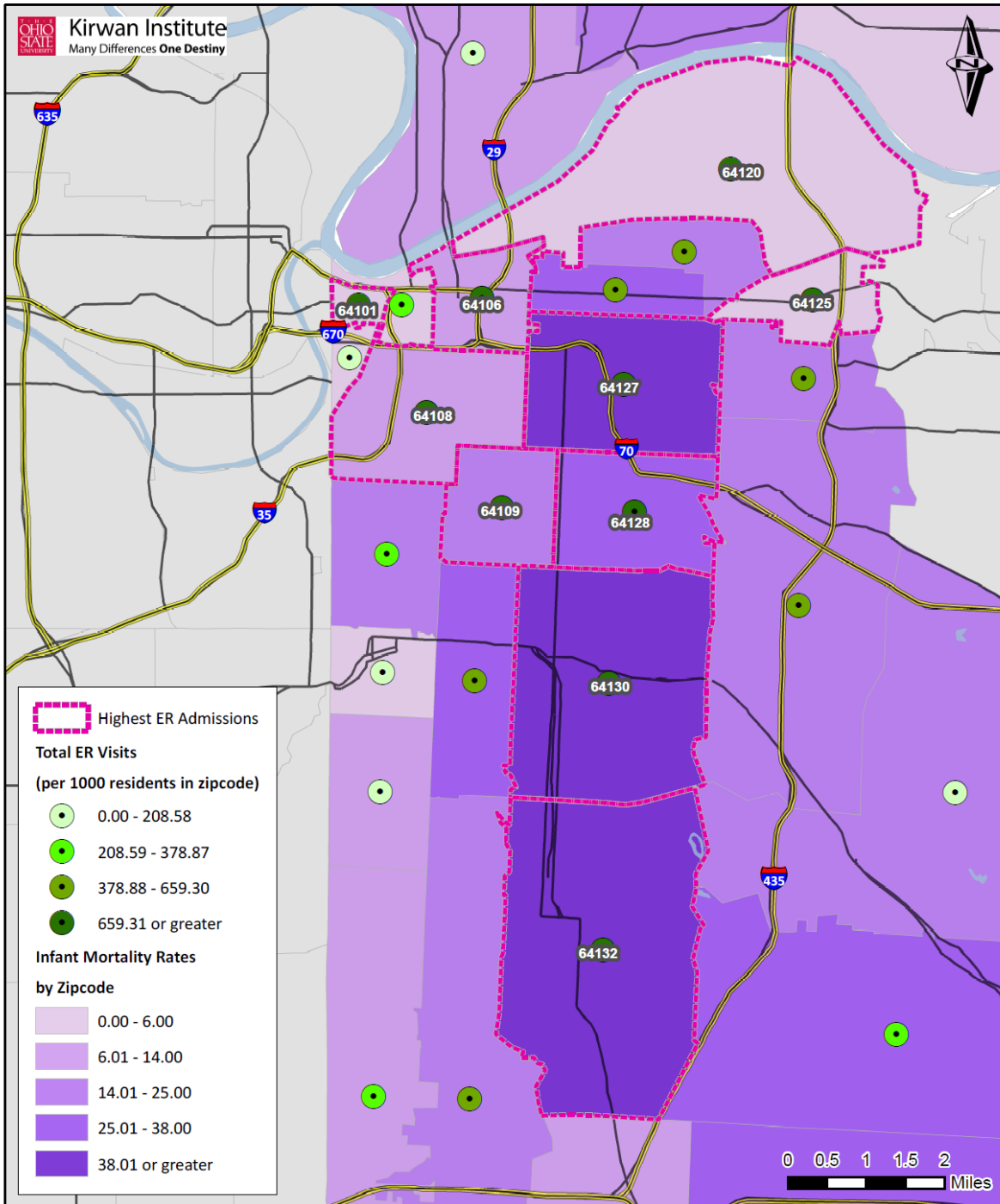
Map 8.0: Life Expectancy and ER admissions

Map 8.0 shows that those zip codes with the highest ER admission rates also have the shortest life expectancy, on average. For example, five of the hot spot zip codes have a life expectancy of 71.9 years on average, compared to an average life expectancy of 80.4 years in the zip codes with the lowest ER admissions. That is a difference of nine years—almost a decade of life.

Map 7.0 - ER Admissions and Infant Mortality Rate (Kansas City, MO)

Highest number of ER admissions by zip code, overlaid with infant mortality rates

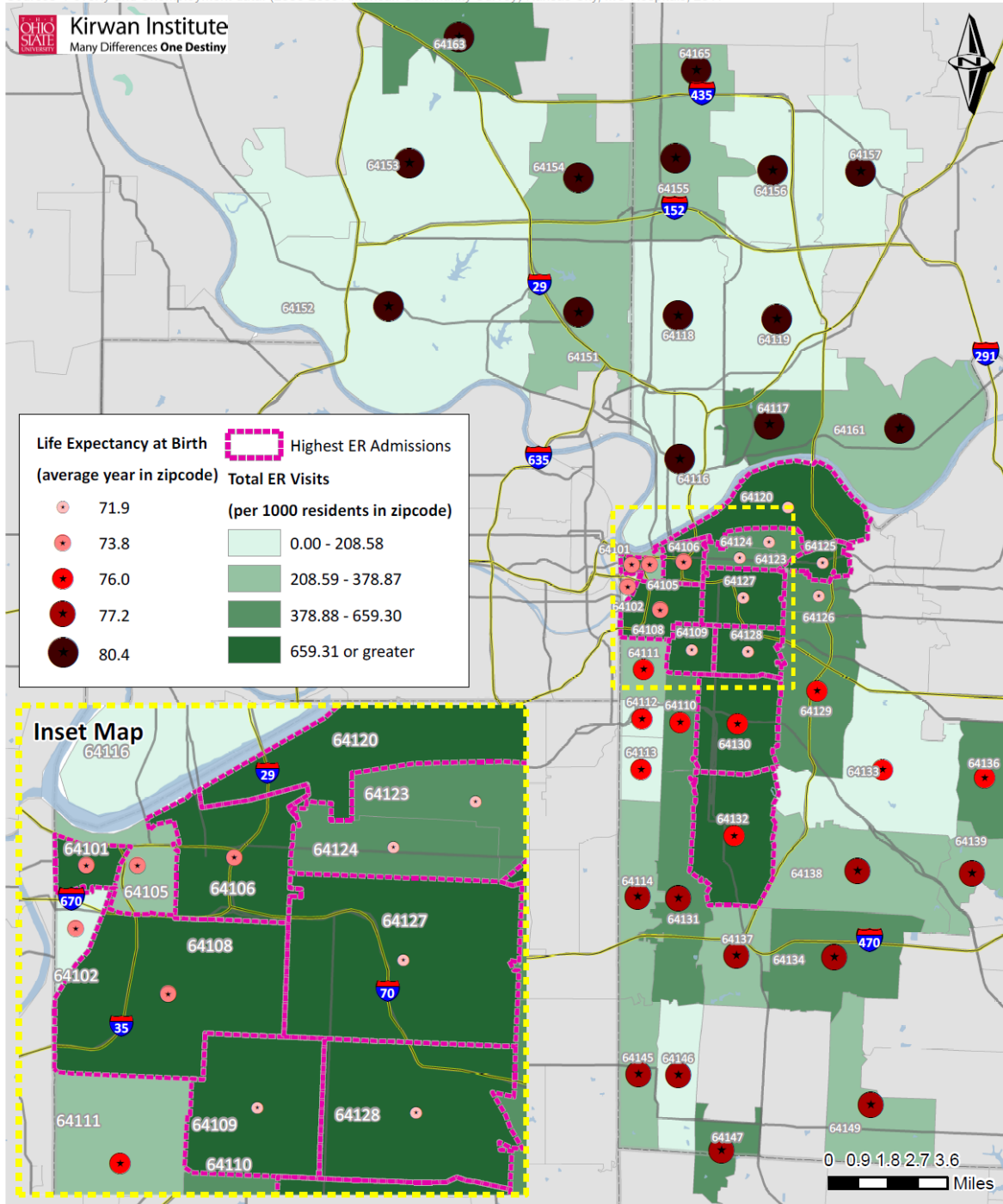
Sources- U.S. Postal Service 2010, MO Hospitals, 2011,



Map 8.0 - Total ER Admissions Rates and Life Expectancy at Birth

Total rate of ER admissions and life expectancy at birth by zip code

Sources- Poverty and Unemployment data: (2005-2009 American Community Survey) Kansas City, MO Hospitals, 2011



Section IV. Health Disparities and Race

The above analyses show not only how access to primary health care matters for health outcomes, but also how place is deeply implicated in these outcomes. Structures and place are indeed critical features of health access and outcomes, and the ER case study confirms this. The ER case study also suggests that race is a significant indicator of health outcomes. As was shown, ER hot spots were poorer and majority minority.

Despite advances in medical care, countless studies document the persistent, large racial disparities in health outcomes. An alarming pattern has emerged: people of color get sick younger, have more severe illnesses, and die sooner than whites. Socioeconomic status (SES), which is usually measured by income, education, or occupation, is one of the most powerful predictors of health, more powerful than genetics, exposure to carcinogens, and even smoking.⁸ However, while class status accounts for a large part of the racial differences in health, research has found that there is an *added* burden of race, over and above socioeconomic status, that is linked to poor health outcomes. So while race and class are related, they are not *interchangeable* systems of inequality. Race has an independent effect on health; research reveals that health is affected by exposure to social and economic adversity over the life course, and that personal experiences of discrimination and institutional racism are added pathogenic factors that can affect the health of people of color in multiple ways.⁹

For example, we know that one of the best indicators for a healthy pregnancy outcome is a mother's educational attainment: the higher her education, the better the outcomes. But does this hold true regardless of race? Research has in fact found that it does not, that a mother's race does matter, independent of educational attainment. In fact, infant mortality rates for black women with an advanced college degree or higher are almost three times higher than the infant mortality rates for white women with a college degree or higher, and *African American mothers with a college degree have worse birth outcomes than white mothers without a high school education*.¹⁰ Another study found that after controlling for major factors that account for preterm deliveries including income, education, smoking, alcohol and depression, black women who reported experiences of racial discrimination were two times more likely to have preterm deliveries than white women.¹¹ The following section describes how racial disparities in health have shown up in Kansas City.

Health Disparities in Kansas City and Missouri¹²

The ER case study provides a highly localized analysis of a broken health care system. The facts that follow illustrate the need to continue advocacy efforts beyond the hot spot zones as well. We also discuss the different challenges in health care access for African Americans and Hispanics in particular. Understanding these disparities and differences can translate the localized actions taken for changing the outcomes in the hot spot zones to a broader, regional focus.

African American Health Disparities

African-Americans in the Kansas City, Missouri region are far more likely than whites to suffer poor health outcomes, largely due to poverty and urban blight. The median income for African-American families is an average 40% lower than their white counterparts across Missouri, and that disparity shifts upward in Jackson County, as well as other counties with large African-American populations.

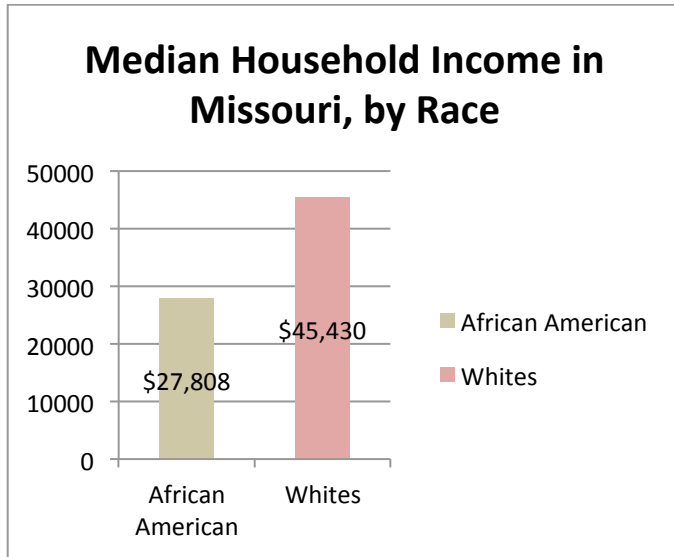


Figure 5. Median Household Income in Missouri, by Race. Source: the Missouri Foundation for Health, 2009

The most consistent health disparities between African-Americans and whites in Missouri are in the areas of diabetes, hypertension, and heart disease. African-Americans are twice as likely to be admitted to the ER for heart failure and over five times more likely to be admitted for hypertension and related diagnoses, than whites. The disparity between rates of African-Americans ER admissions for diabetes has dropped slightly, but is still more than three times the rate of their white counterparts. Nonetheless, African Americans are still more than twice as likely to die from the effects of diabetes.

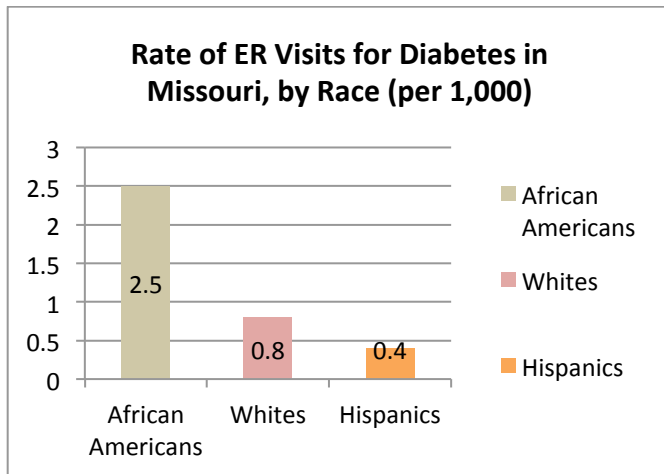


Figure 6. Rate of ER Visits for Diabetes in Missouri, by Race (per 1,000). Source: Missouri Foundation for Health, 2009

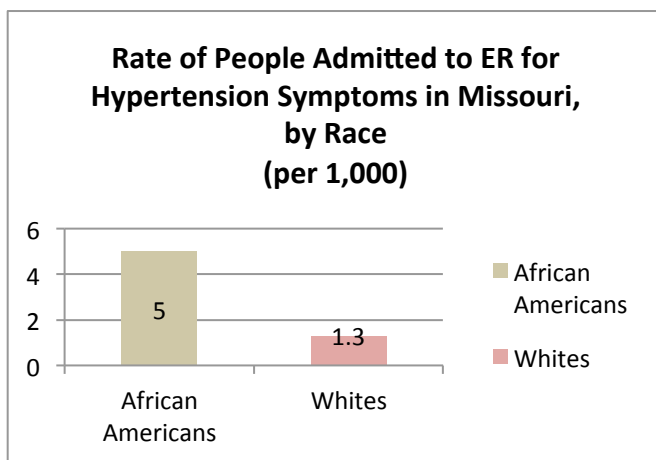


Figure 7. Rate of People Admitted to ER for Hypertension Symptoms in Missouri, by Race (per 1,000). Source: Missouri Foundation for Health, 2009

Part of the problem appears to be the living conditions of African-Americans. Over 30% of African-American families in Missouri live under the poverty level, which is typically associated with less leisure time, higher stress, poorer eating habits, and less access to preventive medical care.

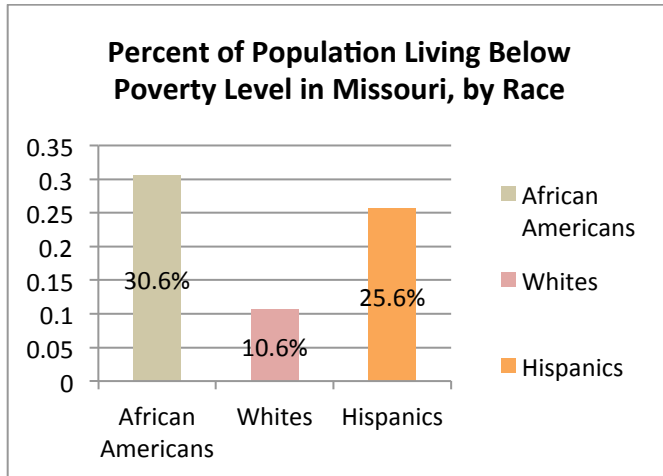


Figure 8. Percent of Population Living Below Poverty Level in Missouri, by Race. Source: Missouri Foundation for Health, 2009

In Jackson County, African-Americans are four times more likely to be admitted to the ER for asthma than are whites, at a rate of 17.4%.¹³ This difference in asthma prevalence has been directly related to “poverty, urban air quality, indoor allergens, lack of patient education, and inadequate medical care,” according to the Missouri Foundation for Health.¹⁴

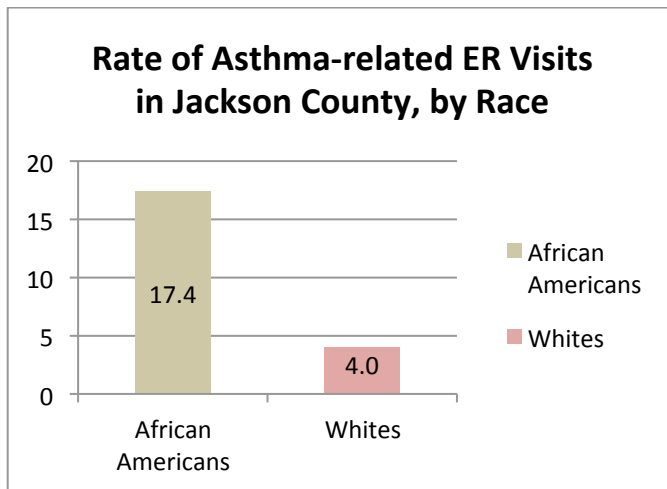


Figure 9. Rate of Asthma-related ER Visits in Jackson County, by Race. Source: Missouri Foundation for Health, 2009

These same factors have been found to be part of the cause of several maternity and child health disparities between African-Americans and whites throughout the state. African-American mothers are twice as likely to give birth to babies that have significantly low birth weights.¹⁵ They are also over two and half times as likely to suffer an infant mortality.¹⁶ Sudden Infant Death Syndrome (SIDS) is almost three times as likely to strike African-American families as white families and has been linked to low birth weight and poor prenatal care.¹⁷ About twenty percent of African-American mothers received inadequate prenatal care, compared to 8.5% of white mothers.¹⁸

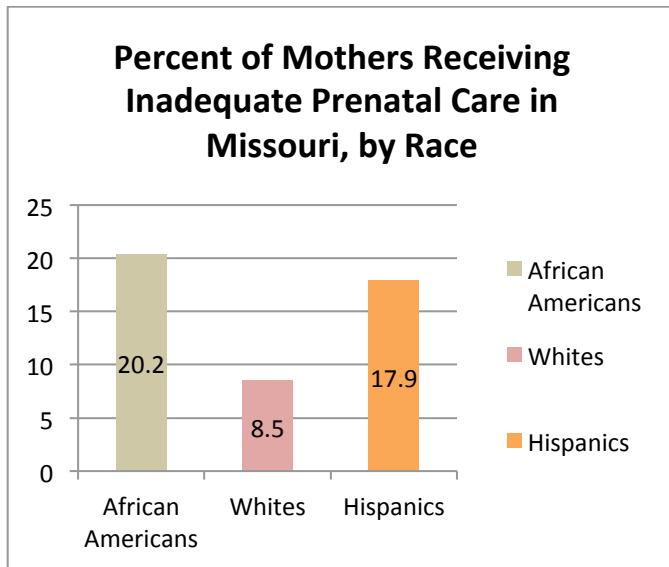


Figure 10. Percent of Mothers Receiving Inadequate Prenatal Care in Missouri, by Race. Source: Missouri Foundation for Health, 2009

The lack of preventative medicine and adequate medical and nutritional information seems to drive many of these negative health factors. Lack of health insurance appears to be the culprit. In Missouri, African-Americans are much less likely to carry private insurance, with only a little over 23% of African-Americans having access to private health care while almost 40% of whites carry private insurance.¹⁹ These factors alone make it much less likely that African-Americans will receive preventive medical treatments or have access to a primary care physician, a key factor in gaining important health information and early screenings. For example, African Americans in Missouri are 10% less likely to be diagnosed with invasive cancers early on, leading to higher death rates from cancer.²⁰

A troubling sign of African-Americans' lack of medical care is the much higher rates of African-Americans admitted to the ER because of schizophrenia and other mental and behavioral disorders. African-American Missourians are two and a half times more likely to be admitted for schizophrenia than whites, and that number is growing. In Jackson County, ten African-Americans are diagnosed with schizophrenia in the emergency room for every three white patients. This disparity can partially be due to higher rates of private insurance for whites, which provides more access to mental health professionals and costly mental health drug therapies. One study concludes that "compared to whites, African-Americans are less likely to be referred to psychiatric care by general practitioners,"²¹ and that stereotyping by providers leads many African-Americans to be improperly diagnosed with schizophrenia. While the report doesn't point to a specific driver of this behavior, it could be assumed that prior access to mental health professionals may lead to more accurate diagnoses and access to needed drugs than in the African-American community.

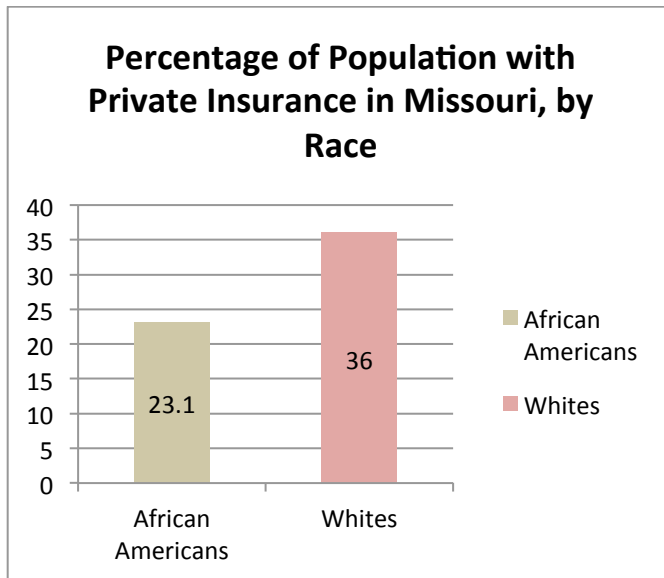


Figure 11. Percentage of Population with Private Insurance in Missouri, by Race. Source: Missouri Foundation for Health, 2009

Hispanic Health Disparities

Overall, the health disparities between Hispanics and whites are not as severe as those between African-Americans and whites, but they are still fairly consistent across all indicators. Since Hispanics in Missouri are almost two and half times as likely to live in poverty and also less likely to have health insurance (31.4% of Hispanics in the state are self-pay patients at an ER),²² the link between low-incomes and poor health outcomes seems undeniable.

A unique factor to Hispanic populations and health outcomes appears to be related to language barriers and fears about immigration status. For instance, statewide, Hispanics are actually 40% less likely to be admitted to the ER than whites for illnesses such as heart disease and diabetes, but are more likely to have higher rates of both—between two and three times more likely.²³ Many believe that this anomaly has its roots in under-reporting of health problems by Hispanic communities, either because of language barriers, or out of a fear of legitimate or illegitimate deportation. According to the Missouri Foundation for Health, Hispanics are largely kept out of the state's SCHIP program because of such factors, effectively denying Hispanic children adequate child care and prenatal health. Hispanic mothers are over twice as likely as white mothers to have inadequate prenatal care in Missouri, although these inadequacies do not appear to lead to comparable numbers of infant mortality and low birth weight, though the lack of reporting sheds some doubt onto this number.

Although Hispanics in Missouri have death rates comparable to or below the rates of whites, health authorities attribute this to unique features of the Hispanic immigrant community in the United States, referred to as the “Hispanic paradox.” One possible explanation for this paradox is that people who move to another country seeking opportunity are likely to be in good health. Another is that U.S. residents of Hispanic origin may return to their country of origin when ill or to die. Due to factors related to under-reporting in the Hispanic community, including language, immigration, and mobility, it is difficult for researchers to gather precise information. However, given the established relationship between poverty and poor health, and the fact that in Missouri, Hispanics are 20% less likely to have a

high school diploma and have rates of families living below the poverty line similar to African Americans, evidence warrants concern about the health of these communities.

Conclusion and Call to Action

Our report shows that ten zip codes in Kansas City, whose demographic make-up is largely low-income people of color who depend on both Medicare and Medicaid, or have no insurance whatsoever, experience the strongest failure of the healthcare system. These zip codes include: 64101, 64106, 64108, 64109, 64120, 64125, 64127, 64128, 64130, and 64132.

Race, poverty, and place—independently and taken together—exert powerful limitations to the ability of these communities to access health care opportunities that are afforded to more affluent and largely white communities. The result is that people in these ten zip codes are dying sooner and suffering more catastrophic illnesses.

The emergency is truly regional in scope. While the most drastic impact is felt in these 10 zip codes, the facts on health disparities indicate that health care access in all of its forms—including insurance, primary care access, and so on—is a major concern for the entire region. In a country that is aiming to be better at true fairness and equality, it is unacceptable that these conditions still exist.

CCO's Call to Action

We believe that it is possible to begin to address these disparities by addressing the Medicaid system that serves these communities. Due the Affordable Care Act, Medicaid is going to expand across the country to include an additional 15 million people. Yet we see that in Kansas City, families with Medicaid are forced to use the ER as a source of primary care. In other words, having Medicaid insurance is not equating to real preventative healthcare.

In organizing, we look for concrete solutions to what seem like insurmountable social issues. Therefore, beginning with reorganizing the local Medicaid system to work better for the families in these 10 zip codes, we can begin to save lives and build stronger and healthier communities throughout Kansas City.

Our efforts will target the Medicare and Medicaid systems first because they are public systems and a significant number of people, who are in the ER even with this coverage, still experience limitations to accessing primary care. If we want to begin to change the health care system overall, this is a key point of intervention, because it's public money and we can hold our government accountable to creating a higher standard of care for Medicare and Medicaid patients while saving money.

Bringing Health Reform Home: Where Do We Go From Here?

CCO has worked tirelessly to shape the 2010 Affordable Care Act to meet the needs of working families. The new law brings historic changes to our nation's health care system in 3 major categories: (1) the law provides near universal coverage through Medicaid expansion and exchange subsidies (2) the law regulates insurance companies to protect families from rising premiums and denial of coverage and (3) the law changes how healthcare is paid for by incentivizing healthcare providers to focus on preventative care and coordination. Together, these changes increase families' access and quality of care, improve population health, and begin to control rising costs.

The Affordable Care Act is a tremendous win for families. *Bring Health Reform Home* is a multi-faceted campaign that CCO is proud to be a part of along with our sister organizations in Camden, Trenton, Newark, Allentown, Brooklyn, New Orleans, Denver, Sacramento and San Diego to use the benefits and resources of the law to transform the health of the medically underserved in our respective communities.

The present analyses show that many of the people in Kansas City's urban core live in neighborhood health "hotspots," where families lack access to primary care, even if they have Medicaid or Medicare, suffer from chronic conditions, and often use emergency rooms as the only source of care or go without. *Bring Health Reform Home* is applying the model pioneered by PICO Camden Churches Organized for People and Dr. Jeff Brenner from the Camden Coalition of Health Care Providers to build *Community Driven Health Delivery Models* to improve care for the families that need it most, while lowering costs. During the initial phase of the Camden health demonstration project, which focused on 36 Super User patients (those utilizing the Emergency Room at high frequencies), findings show that ER visits and hospital admissions were reduced by 40%. The cost to treat these patients, averaging \$1.2 million per month prior to participating in the demonstration, was reduced to \$500,000 per month. This is a cost savings of 56%.

While Camden, New Jersey, is most certainly not Kansas City it is not entirely dissimilar. We believe our thesis of "Better Care is Cheaper Care" will yield the same promising results when tested and evaluated here in Kansas City. By improving the quality of care to the medically underserved, including those patients on Medicare and Medicaid, populations living in ER hotspots we have seen the health of a city improve and net cost savings to a budget challenged state. We have seen the thesis tested and proven in Camden and CCO is prepared to work with medical, faith, academic and social service communities in the Kansas City metro to build a health delivery model we hope will replicate similar results.

CCO is prepared to commit the resources of established community relationships, social systems analysis, strategy development and community impact evaluation to the cause of building a *Community Driven Health Delivery System* to improve the quality of life for the Kansas City metro. On December 12-14, 2011 CCO will lead a delegation of patients, providers and policymakers to San Diego to meet with Dr. Jeff Brenner. Dr. Brenner will work with our team to advise, offer critique, and to think strategically with us on how to implement a Camden-like model in Kansas City.

How can the medical community assist CCO in this effort?

- The key to addressing the medically underserved is to know where they are. Billing data are critical in developing this understanding and we would encourage you to help us by sharing data that shows where the "hotspots" ER visitors and hospital readmissions are in the Kansas City metro. This information will allow us to determine what sorts of non-medical interventions are necessary in that particular community. By identifying high cost health care "hot spots" we can identify the costliest patients in order to improve their care and lower costs.
- Primary care providers responsible for the hot spot zip codes form "high utilizer" teams to focus on the patients who are most frequently using the ER, and provide a higher quality of direct care for them—which includes home visits for check-ups and to monitor medications, as well as connecting patient to the appropriate social supports. In this way, the patients who need the most care can be better monitored, and it would be possible to save Medicaid dollars for reinvestment in the primary care network for "hot spots."

- We need specialists to work with our primary care and safety net provider communities in an intentional manner in order to address the most pressing health needs of those with poorly managed chronic conditions.

How can the political community assist CCO in this effort?

- Local, State and Federal elected officials should meet with a CCO delegation to hear personal testimonies and our proposed solution to improve the health of Missouri’s citizens and improve the state’s economic bottom line by reducing the costs to care for the most vulnerable.
- State legislators can draft, submit and vote for legislation aimed at capturing Medicaid savings and pouring them back into the Safety Net health system.
- Take a tour of a participating health provider to see how this innovative model is transforming lives of the people who come through the door.

How can the everyday citizen get involved?

- Hold a House Gathering and share stories on why healthcare matters to you.
- Participate in or set up a coffee conversation with your state representative to focus on healthcare issues.
- Ask your doctor or medical provider to sign the Partnership for Patients Pledge.
- Join CCO at its *Healthy People, Healthy Places* gathering, the first Thursday of each month.

The analyses we have undertaken and shared in this report are an important first step towards this transformative change, but our work is only just beginning. In the end, we know that reliance on the ER for treatment of preventable conditions is not sustainable, and represents a cost to the system in terms of ER visit costs, patient- admitted costs, and costs to others who have actual emergencies. More importantly, such a broken system also has a high cost on the people forced to rely on ERs for their primary care, in terms of poorer health and shorter life expectancy. We also know that there are people ready and willing to work for the kind of change needed; transformation is necessary not only for fairness, but also for effectiveness.

Appendix A: Organizational Information

Communities Creating Opportunities (CCO) and the **Kirwan Institute for the Study of Race and Ethnicity** at the Ohio State University have embarked on a collaboration to analyze health opportunity in the Kansas City region, with particular attention to marginalized communities of color. We come together with the intention to build a common understanding of the conditions necessary for health in order to bring transformative change to the public health delivery system that is not only sustainable, but that promotes better health outcomes for all. Key to this understanding is an awareness of the causes and consequences of health inequities and their relationship to racial and ethnic disparities and hierarchies.

Who We Are

CCO’s core mission is rooted in the religious experience, in social justice, and in the conviction that the common good can be found in our common beliefs; that our diverse cultures, ethnicities, faith traditions, and experiences enrich and strengthen us in pursuing our mission. We believe that people should have a say in the decisions that shape their lives, and they know best what their families and communities need. Their voices need to be at the center of political life. We believe that every citizen, given the proper training, motivation and support can take extraordinary steps to improve the quality of

life for their communities, and that while government can play a vital role in improving society, citizens and local organizations need to have the power to influence policy and hold public officials accountable.

CCO's community organizing methodology is simple. Working alongside member congregations, CCO trains volunteers to:

- Reach out to their neighbors
- Identify common concerns
- Research possible solutions
- Collaborate with key decision-makers to implement solutions

The Kirwan Institute is a multi-disciplinary research organization at The Ohio State University in Columbus, Ohio. The Kirwan Institute partners with people, communities, and institutions worldwide to think about, talk about, and engage issues of race and ethnicity in ways that create and expand opportunity for all. Through interdisciplinary research and other working partnerships, the Institute aims to deepen the understanding of the causes and consequences of racial and ethnic disparities, in order to stimulate change to bring about a society that is fair and just for all people. We believe that all communities of people are interconnected and that society benefits when all human capabilities are developed and maximized to serve the greater good.

The Institute's Opportunity Communities Program conducts applied research to support civic engagement, community development, fair housing and sustainable development. The program collaborates with partners to build community capacity and identify solutions to create pathways to opportunity in housing, community and regional development, employment, health, and civic engagement for marginalized communities.

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⁸ Dr. David R. Williams, "The Anatomy of Poverty! Case Study of the Social Context of Disease." Presentation to the Truman Medical Center Annual Board retreat, Kansas City, MO. May 2010.

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¹² This section draws heavily from two reports by the Missouri Foundation for Health. "Minority Health Disparities: 2009 African American Data Book" and "Minority Health Disparities: 2009 Hispanic Data Book." Winter 2009.

¹³ Missouri Foundation for Health. "Minority Health Disparities: 2009 African American Data Book." Winter 2009. Page 37.

¹⁴ *Id.* at 36.

¹⁵ *Id.* at 14

¹⁶ *Id.* at 16

¹⁷ *Id.* at 18

¹⁸ *Id.* at 12

¹⁹ *Id.* at 8

²⁰ *Id.* at 49

²¹ *Id.* at 42

²² Missouri Foundation for Health. "Minority Health Disparities: 2009 Hispanic Data Book." Winter 2009.

²³ *Id.* at 49