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"Nuestra Salud"

REPORT ON LOCAL HEALTH DISPARITIES
## COMMISSIONED BY THE LATINO HEALTH COALITION

2014

I.   Introduction

Ethnic disparities in health are troubling and persistent in our region. Previous editions of "*Nuestra Salud*" showed that Latinos in our community experience worse health on a variety of measures in comparison to Whites (for a complete history of the Minority Health Reports, refer to Appendix A). These reports also demonstrated that this pattern of disparate health does not hold for all outcomes: in some instances, Latinos experience disease burdens that are comparable to or better than Whites. While findings such as these speak to the complex determinants of local Latino health, they do not change the fact that this community is far from achieving health equality across ethnic groups.

The Finger Lakes Health Systems Agency (FLHSA) and the Latino Health Coalition (LHC) believe that improving the health of Latinos should be a community priority. Given that Latinos represent the fastest growing racial or ethnic group (Figure 1) in the Finger Lakes region (a nine county region consisting of Monroe, Livingston, Ontario, Seneca, Yates, Chemung, Schuyler, Steuben, and Wayne counties) addressing the health and health care needs of this population is of rapidly increasing importance.

Figure 1
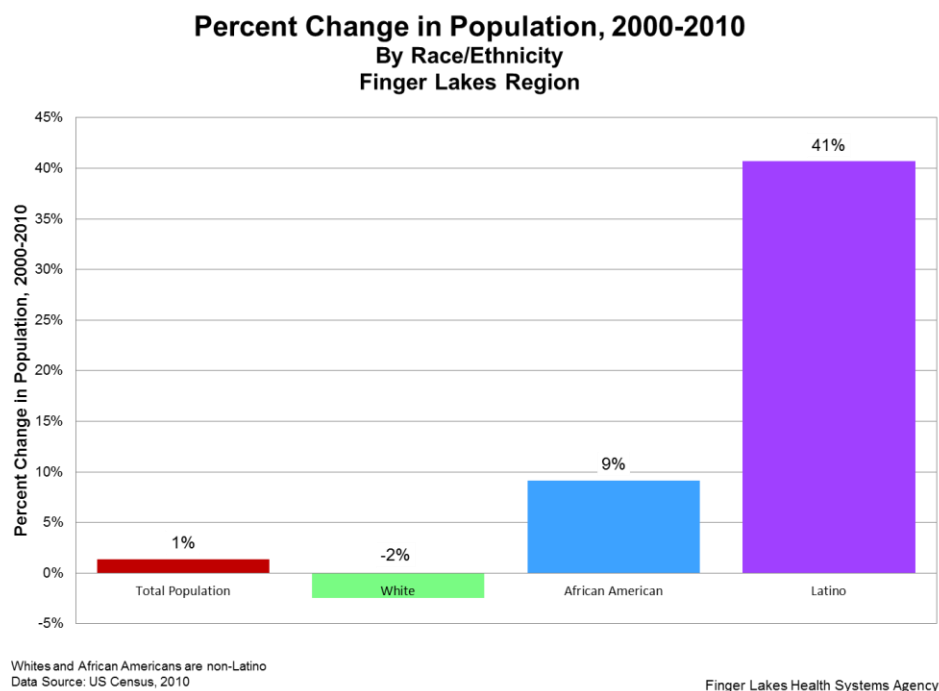
A key component of improving the health of Latinos in our community and reducing unwarranted differences is obtaining a clear picture of the scope of the problem and a better understanding of the potential underlying causes. This report achieves these two objectives. It documents ethnic health disparities in our community using numerous indicators to capture the multifaceted nature of "good health." In addition, it explores potential root causes by evaluating racial and ethnic groups on four

categories of health determinants: the physical environment, the social environment, health behaviors, and medical care. Looking at these determinants is an acknowledgement of the complex mechanisms that cause good or bad health. This report also places greater emphasis on ascertaining the role of "place" in driving racial and ethnic health disparities by focusing on smaller geographic regions. While past disparity reports captured the health of local minority populations, discussions within the Coalition revealed the need to move from region and county level analyses to an examination of Latinos living in select ZIP codes. A major reason for this shift in focus is an acknowledgement that the Latino population in the Finger Lakes region is diverse. For example, in the rural counties of the Finger Lakes region, 27% of Latinos have Mexican origins compared to only about 11% of Latinos in suburban Monroe County. Meanwhile, more than 80% of the Latinos living in the city of Rochester are of Puerto Rican descent compared to 58% and 52% of those living in suburban Monroe County and the rural counties, respectively (Figure 2). These ethnic groups have different backgrounds and likely experience distinct social circumstances. As a result, the Coalition believes the health needs of a Mexican-American living in rural Wayne County should not be expected to be the same as a Puerto Rican living in the inner-city of Rochester. This level of heterogeneity suggests that in order to accurately capture the health status of the broad category of Latinos, a geographically partitioned approach is needed to prevent inappropriate generalizations. The Coalition further decided that this report should give special attention to the predominantly Puerto Rican Latino population living in urban settings.

Figure 2

Composition of Latino Household Population
By Origin and Geography
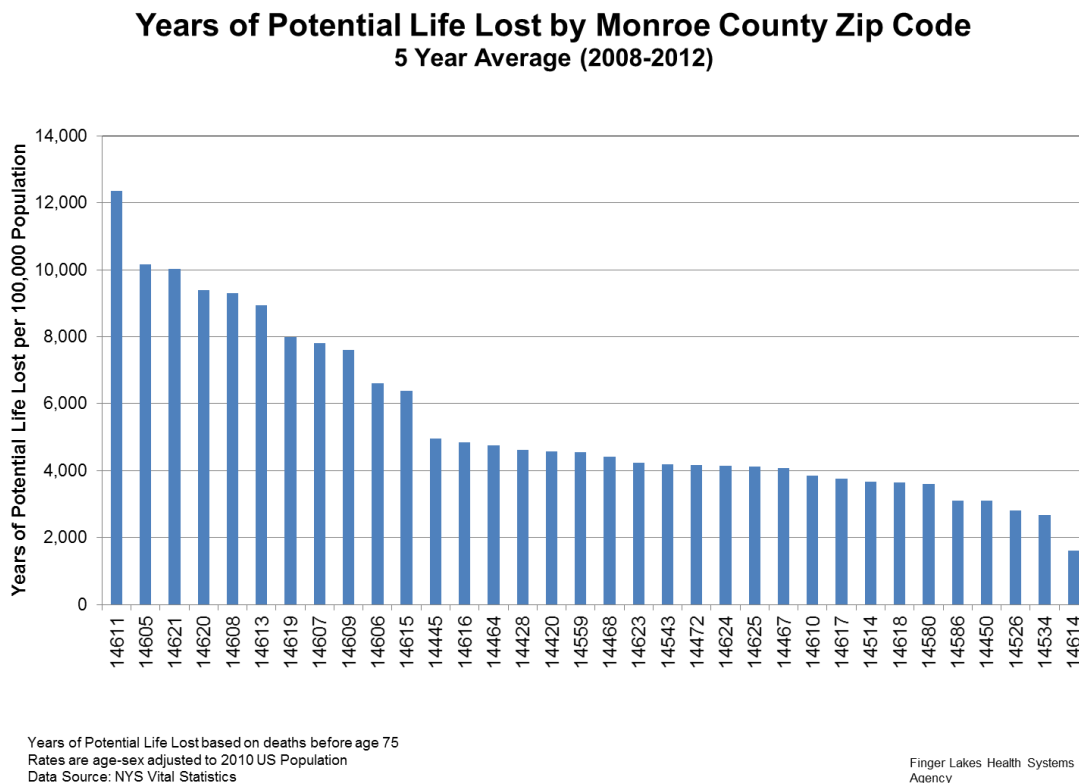**Finger Lakes Region, 2010**
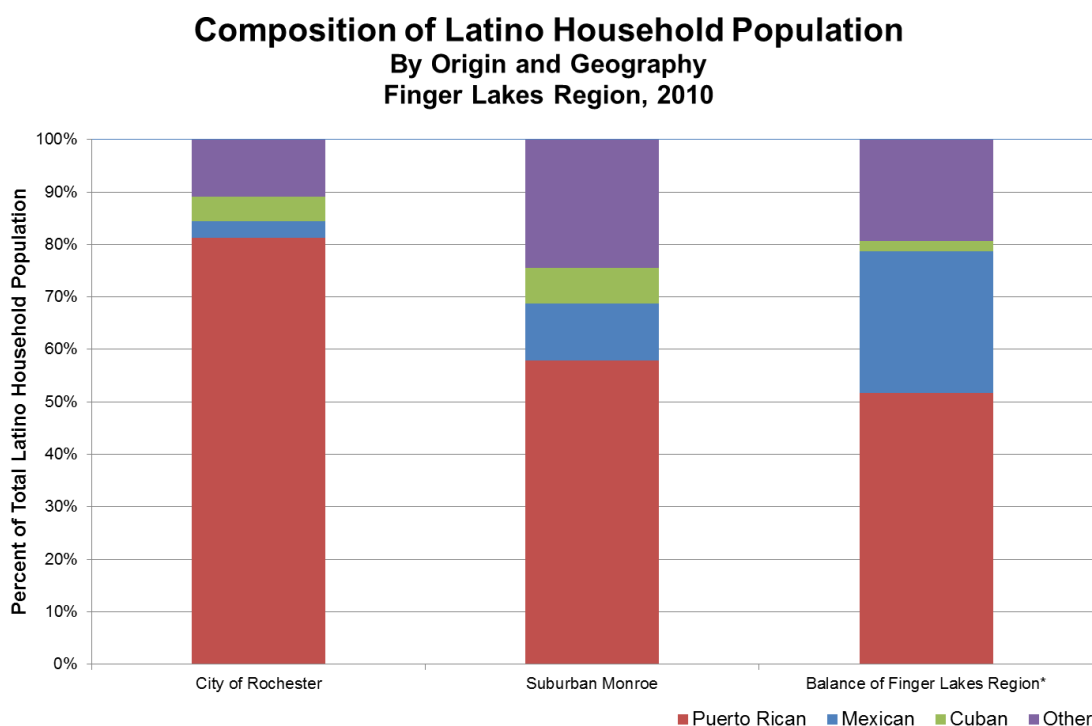
*Balance of Region does not include Schuyler County, where data are not available.
Data Source: US Census, 2010

Finger Lakes Health Systems Agency

While analysis could be limited solely to county or city level, there is evidence that even finer divisions are needed to fully understand the health status of the community. Specifically, an examination of a basic measure of premature mortality (Years of Potential Life Lost) indicates that the health of individuals varies considerably by ZIP code of residence within Monroe County (Figure 3).

Figure 3

Years of Potential Life Lost by Monroe County Zip Code
5 Year Average (2008-2012)

Years of Potential Life Lost based on deaths before age 75
Rates are age-sex adjusted to 2010 US Population
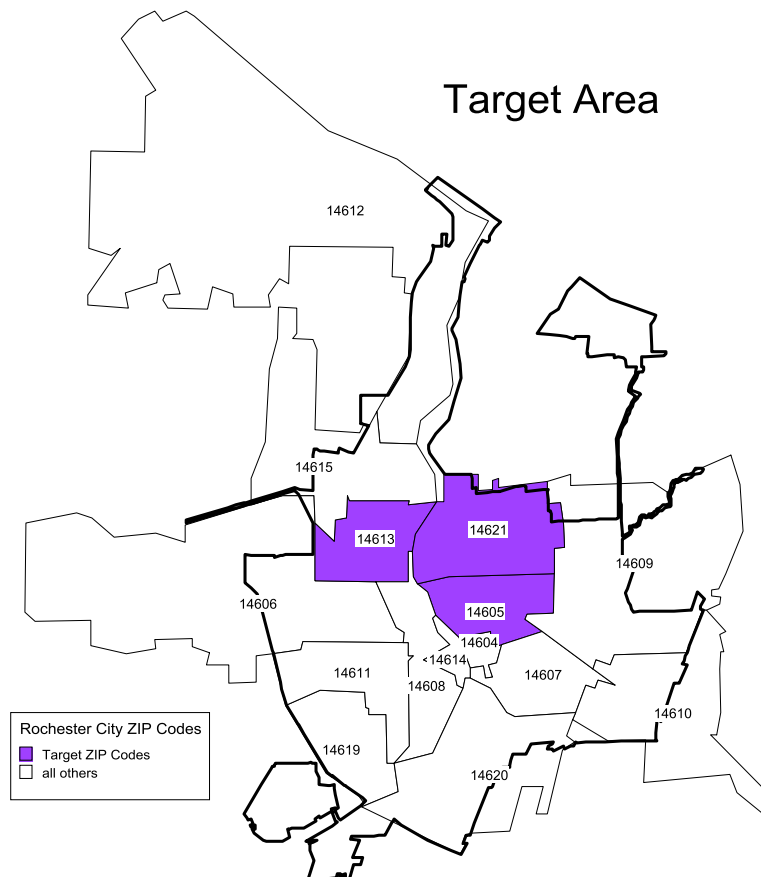Data Source: NYS Vital Statistics

Finger Lakes Health Systems
Agency

Looking only at county level outcomes would bias our findings toward average values, thereby masking serious health differences between a ZIP code like 14611 (city of Rochester) and 14534 (Pittsford). As a result, considerable effort was put forth to study the health of Latinos at as fine a partition as possible.

The Latino Health Coalition identified three ZIP codes it believes warrants special attention. Specifically, it defines a Target Area consisting of ZIP codes 14605, 14613, and 14621 (Figure 4). Since the Latino population is dispersed throughout the Finger Lakes region, there is no small set of ZIP codes that will capture the preponderance of the Latino population; yet this area does contain significant numbers of Latinos, representing 28% of all Latinos living in the Finger Lakes region. Furthermore, these ZIPs are marked by largely segregated neighborhoods (77% percent of residents are Latino or African American) and significant poverty (66% of families fall below 200% of the Federal Poverty Level), providing some evidence that the individuals living in these ZIPs may include some of the most vulnerable Latinos

in the region. Finally, Coalition members felt these areas were significant as they encompass several close knit neighborhoods, or "*los barrios,*" such as "*La Avenida*" that are the centers of the Latino community given their pervasive Hispanic culture and historical significance for Latino immigrants.

Figure 4

Target Area

14612

14615

14613   14621

14609

14606

14605

14604

14614

14611   14607

14608

14610

Rochester City ZIP Codes
■ Target ZIP Codes
□ all others

14619

14620

While breaking down the data into ZIP Codes provides us the opportunity to gain a clearer picture of the true ethnic disparities in our community, it does come with trade-offs. Previous local reports on minority health have noted the difficulty obtaining reliable data from which conclusions about minority health can be made. Those problems persist and are often exacerbated when smaller geographies are used as the unit of analysis. Since much of the data needed for analyses are provided by surveys, the relatively small populations of African Americans or Latinos often lead to small numbers of respondents in samples, making the production of statistically meaningful estimates of population-specific indicators difficult. Additionally, the data available vary by the geographic area of interest. Not all datasets are available at the ZIP code level; consequently, our goal of looking at the Focus Area and comparing to surrounding ZIP codes was not always possible. In these instances, we attempted to use the smallest geographic partition possible, whether it be state, region, county, or city level information.

It should be noted that the definition of African American and White, which will be used as comparison groups throughout this report, can vary depending on the source of the information. Since 2000, the U.S. Census Bureau has allowed individuals to indicate they are of more than one race. Most other data sources require individuals to choose a single racial category. Thus, because this report draws data from a number of sources, "African American" (and White) may have a different definitions depending on the context. Appendix B contains further information on the various data sources. Despite these variations, this report will use White to refer to individuals who identify themselves as non-Hispanics of white race. African American will be used for individuals who identify themselves as non-Hispanics of black race. Latino will be used to identify those who are of Hispanic ethnicity.

The report will proceed by first examining the health outcomes of Latinos living in the Finger Lakes region, Monroe County, and the Focus Area in comparison, primarily, to Whites. A more complete description of the determinants of health will then be provided in Chapter III, followed by evaluation of racial and geographic disparities across each of the four health determinants in Chapters IV-VII.

II.   Health Outcomes

This chapter documents measureable health outcomes for Latinos in the Finger Lakes region.   The concept of health can be quantified in a variety of ways, including self-perceived health status and quality of life, the prevalence of various disease states or disease risk factors, the use of health care services, or an ultimate outcome such as mortality rates. The current investigation attempts to capture the multi-faceted nature of health by using a variety of measures; however, special attention is given to premature mortality.[1] Dying early (defined in this report as death before the age of 75) is one of the most tangible expressions of a poor health outcome.   It is a principal area of interest as YPLL captures the loss of potentially productive years of life and the depletion of valuable human capital within a community. Furthermore, premature mortality focuses on deaths which should to some extent be preventable. As such, disparities in this outcome likely represent conditions which are both unjust and actionable from a community standpoint.
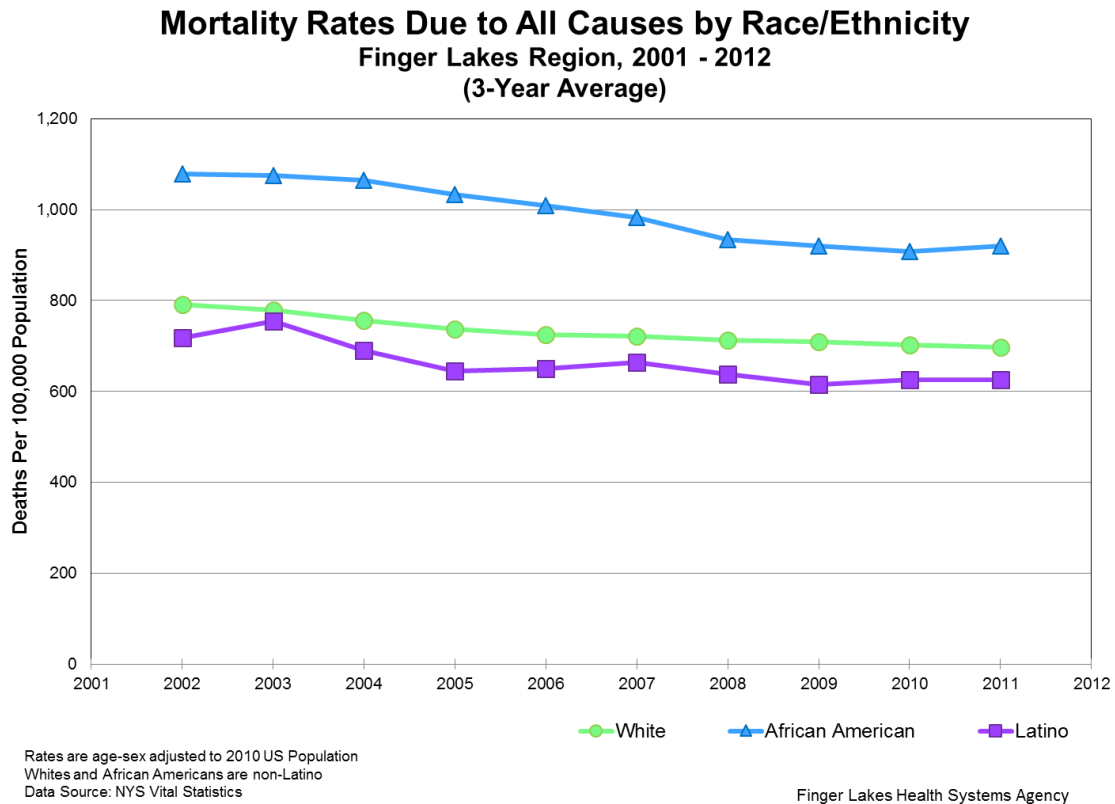
This chapter begins by examining health outcomes at the largest geographic area of interest, the Finger Lakes region, and proceeds to an examination of Monroe County, followed by the Target Area. Many of our data sources are not available for all geographic regions, and in some instances we are unable to differentiate between racial and ethnic groups. As such, the information presented will vary depending on the geography being assessed.

Finger Lakes Region

Looking historically at a broad measure of health for this geography by race and ethnicity, we see that Latinos experienced modest improvements in overall mortality rates between 2001 and 2012 (Figure 5). They had adjusted rates that are the lowest among all three racial/ethnic groups. This may suggest comparatively better health than both Whites and African Americans, in terms of death rates, however it may be a reflection of the generally younger Latino population. While the reported mortality rates adjust for the age and gender distributions of the racial/ethnic groups of interest, it is possible that large differences have not been entirely accounted for.
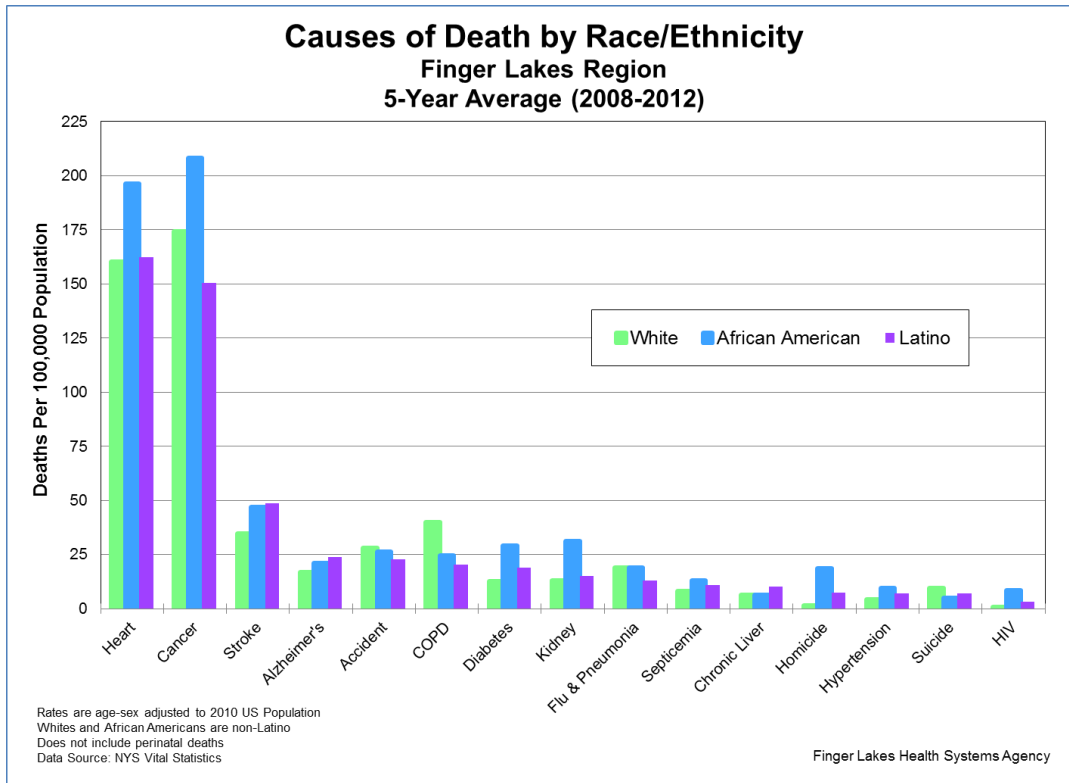
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[1]Years of Potential Life Lost before age 75 (abbreviated as YPLL in this report). See the Appendix B for notes on how this statistic is calculated.

Figure 5

Mortality Rates Due to All Causes by Race/Ethnicity
Finger Lakes Region, 2001 - 2012
(3-Year Average)

Rates are age-sex adjusted to 2010 US Population
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

Finger Lakes Health Systems Agency

The leading causes of mortality among Latinos are shown in Figure 6. Chronic diseases occupy four of the top five causes, with cancer and heart disease being the two largest causes of death. Looking across the causes, it also appears that Latinos experience mortality rates that are similar to or lower than those of Whites with a few notable exceptions. For example, Latinos have higher rates of mortality from homicide, HIV, diabetes, and Alzheimer's disease compared to Whites.

Figure 6

Causes of Death by Race/Ethnicity
Finger Lakes Region
5-Year Average (2008-2012)

Rates are age-sex adjusted to 2010 US Population
Whites and African Americans are non-Latino
Does not include perinatal deaths
Data Source: NYS Vital Statistics

Finger Lakes Health Systems Agency

Mortality may not capture the whole picture; premature mortality reveals a reversal of the pattern seen between Latinos and Whites. Years of Potential Life Lost (YPLL) provide a standardized way to capture premature mortality by giving greater weight to deaths which occur at young ages (refer to Appendix B for a more complete description). From 2000 to 2012, Latinos have consistently had rates of YPLL that are greater than Whites' (but less than those experienced by this region's African Americans), although the gap between Latinos and Whites appears to be narrowing (Figure 7).
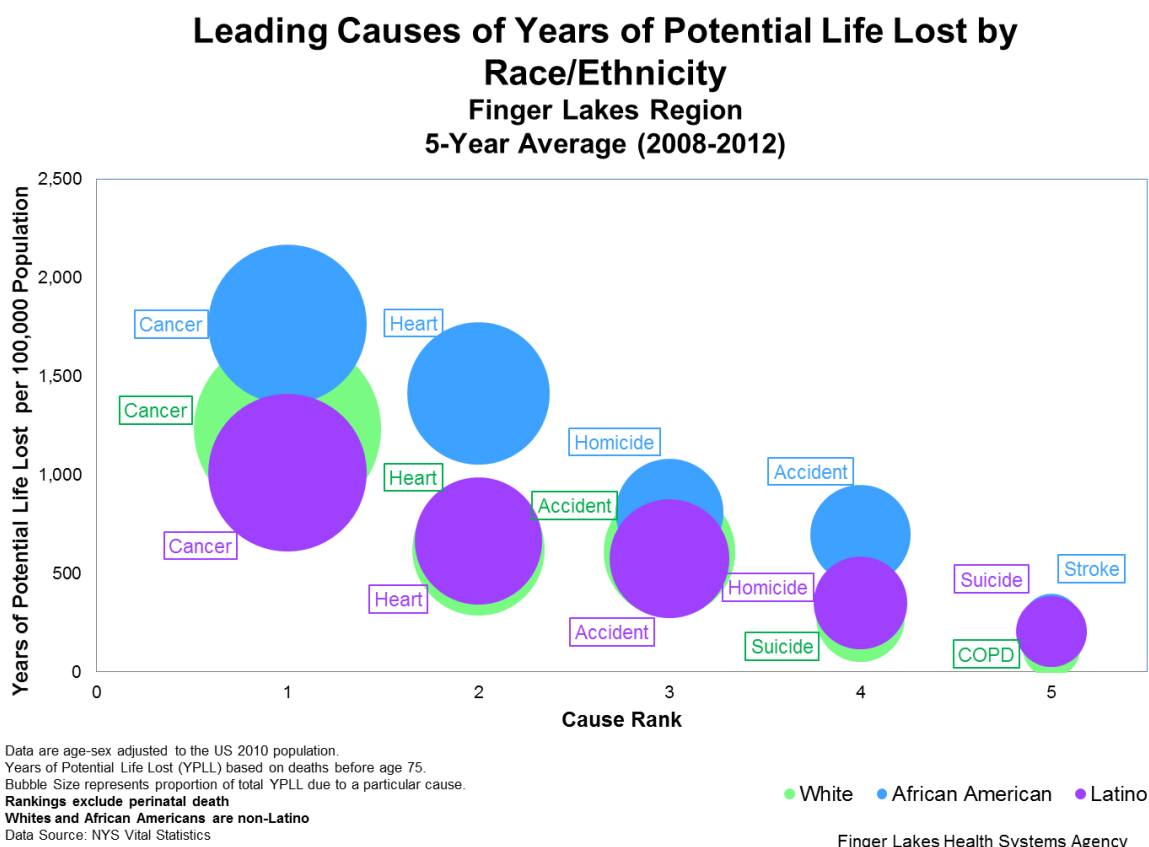
Figure 7

**Years of Potential Life Lost Due to All Causes
By Race/Ethnicity**
Finger Lakes Region, 2000-2012
(3-Year Averages)

Years of Potential Life Lost based on deaths before age 75
Rates are age-sex adjusted to 2010 US Population
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

Finger Lakes Health Systems Agency
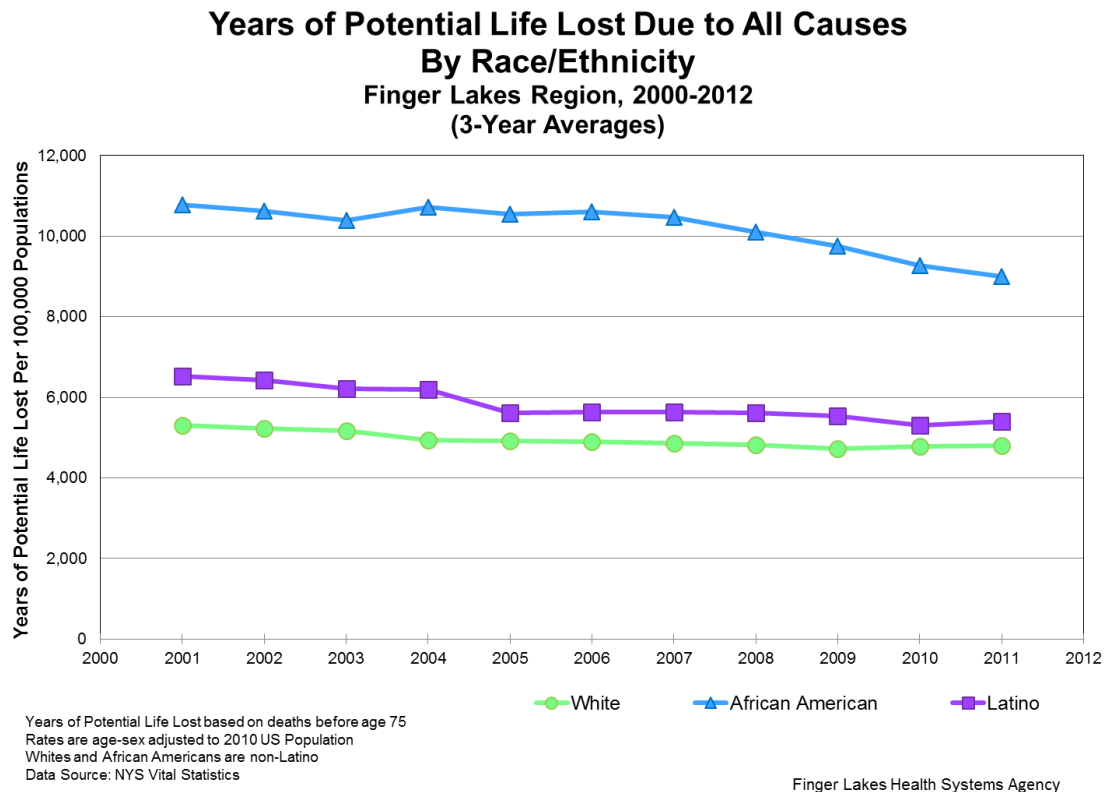
We believe that this measure may better describe the health status of Latinos for several reasons. Since the majority of deaths occur among the elderly, an examination of mortality rates is biased towards providing greater information about the health of the elderly population. Given that the local Latino population is relatively young in comparison to African Americans and Whites (5% of the Latino population in the Finger Lakes region is over the age of 65 compared to 16% of the White population and 7% of the African American population), adjusted mortality rates provide less information about the majority of Latinos living in the region. Additionally, YPLL focuses on deaths that should, by and large, be preventable. As an action plan to improve health status of local Latinos is developed, the highest priority should be given to those conditions which are modifiable and most directly contribute to premature mortality. With this rationale in mind, we conclude that there is evidence of ethnic health disparities in the Finger Lakes region.

Ethnic variation in premature mortality is not simply limited to differences in overall rates of YPLL. Figure 8 demonstrates that while cancer, heart disease, and accidents are leading contributors to premature mortality for all racial/ethnic groups in the Finger Lakes region, there are noteworthy differences. For example, homicide is the third and fourth leading cause of YPLL for African Americans and Latinos, respectively, while it fails to enter the top five for Whites. Suicide is a top five for Latinos and Whites, but not for African Americans. Chronic obstructive pulmonary disease (COPD) is a unique leading contributor for Whites and Stroke is unique to African Americans in the region.

Figure 8

Leading Causes of Years of Potential Life Lost by Race/Ethnicity
Finger Lakes Region
5-Year Average (2008-2012)

Data are age-sex adjusted to the US 2010 population.
Years of Potential Life Lost (YPLL) based on deaths before age 75.
Bubble Size represents proportion of total YPLL due to a particular cause.
Rankings exclude perinatal death
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

White   African American   Latino

Finger Lakes Health Systems Agency

Monroe County

In Monroe County, the rates and causes of mortality largely match the racial/ethnic patterns seen at the region level, with the overall mortality rate for Latinos within the county largely mirroring the rate seen in Whites (Figure 9). The five leading causes of death for Latinos remain the same (Figure 10).
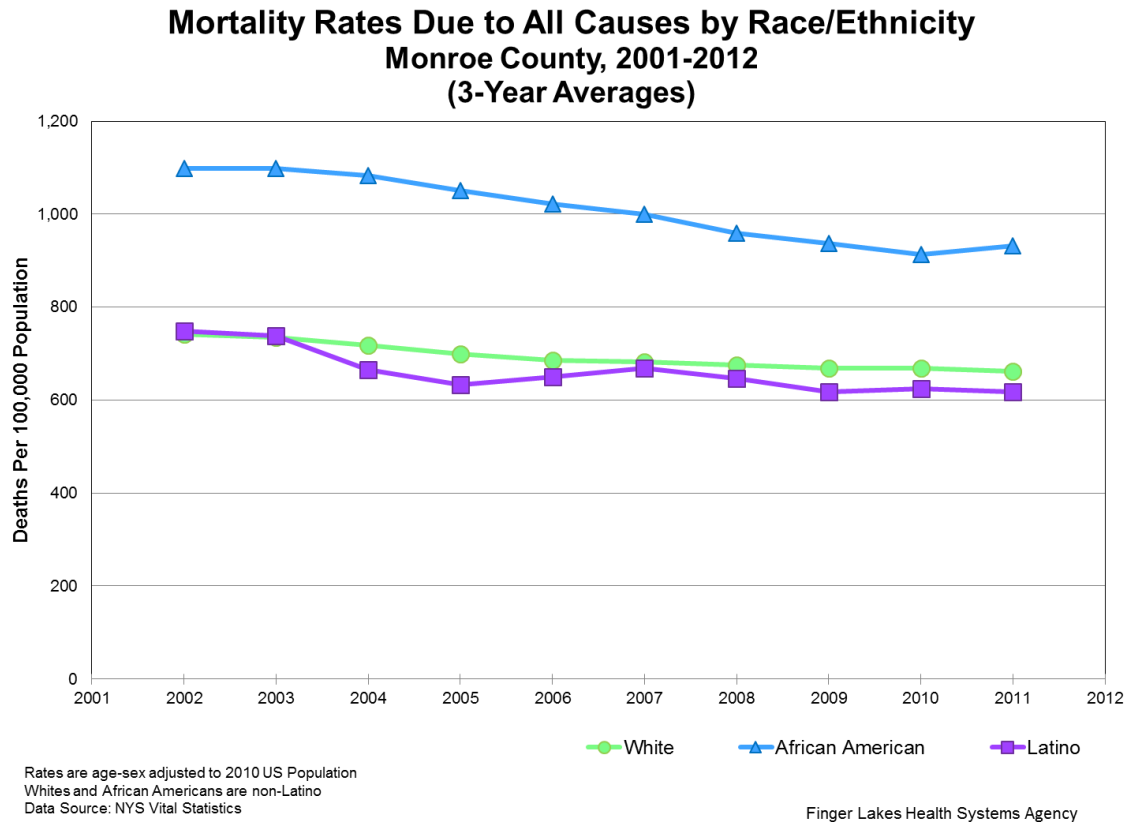
Figure 9

Mortality Rates Due to All Causes by Race/Ethnicity
Monroe County, 2001-2012
(3-Year Averages)

Rates are age-sex adjusted to 2010 US Population
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

Finger Lakes Health Systems Agency

Figure 10

Causes of Death by Race/Ethnicity
Monroe County
5-Year Average (2008-2012)

Rates are age-sex adjusted to 2010 US Population
Whites and African Americans are non-Latino
Does not include perinatal deaths
Data Source: NYS Vital Statistics

Finger Lakes Health Systems Agency
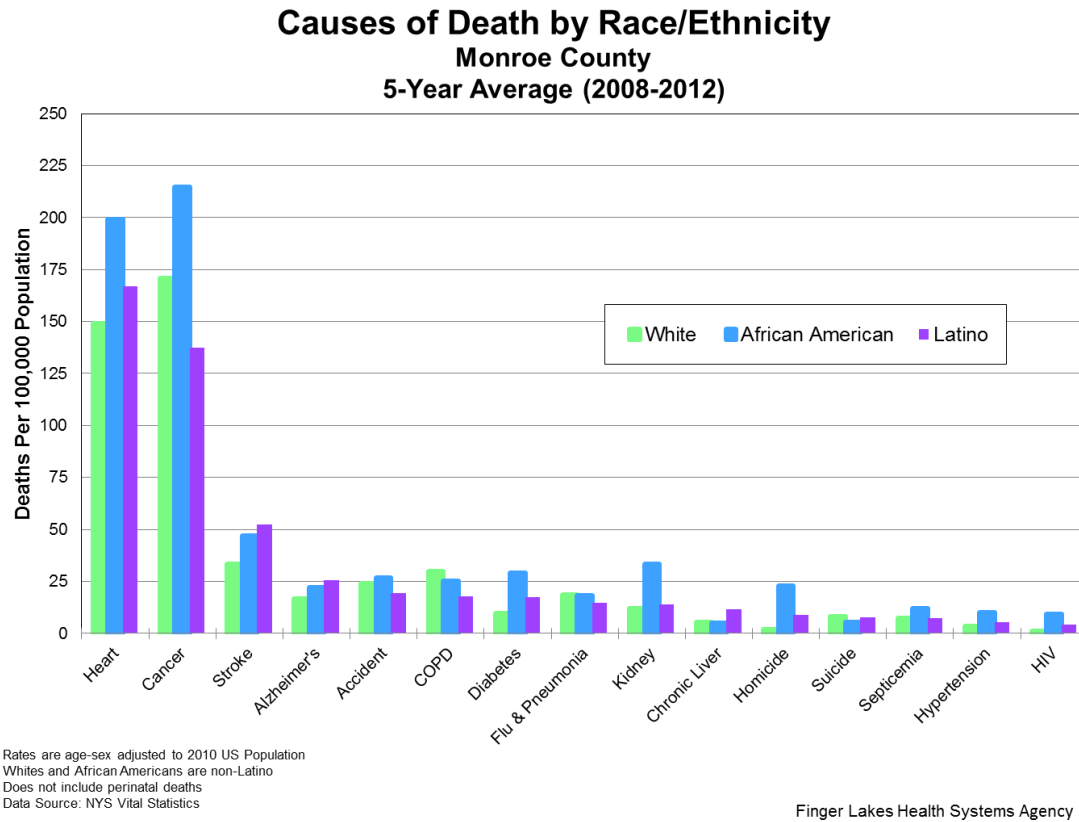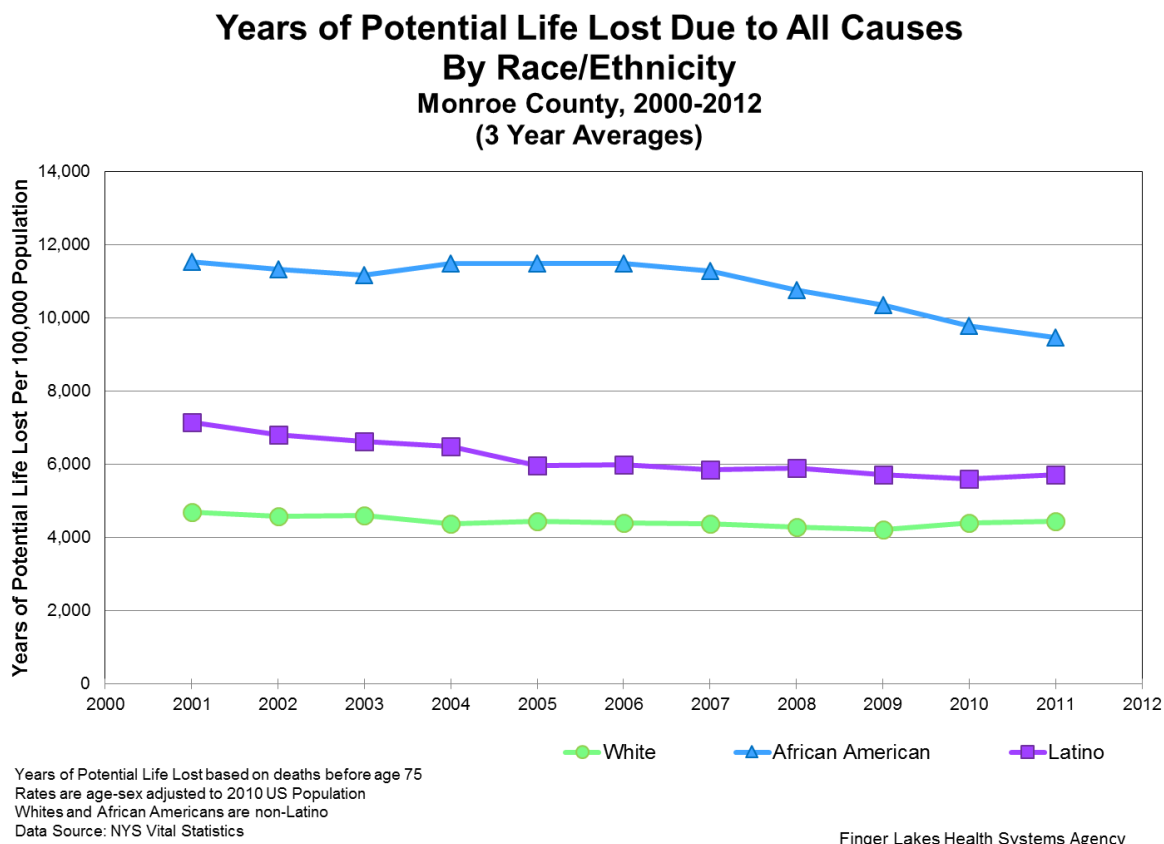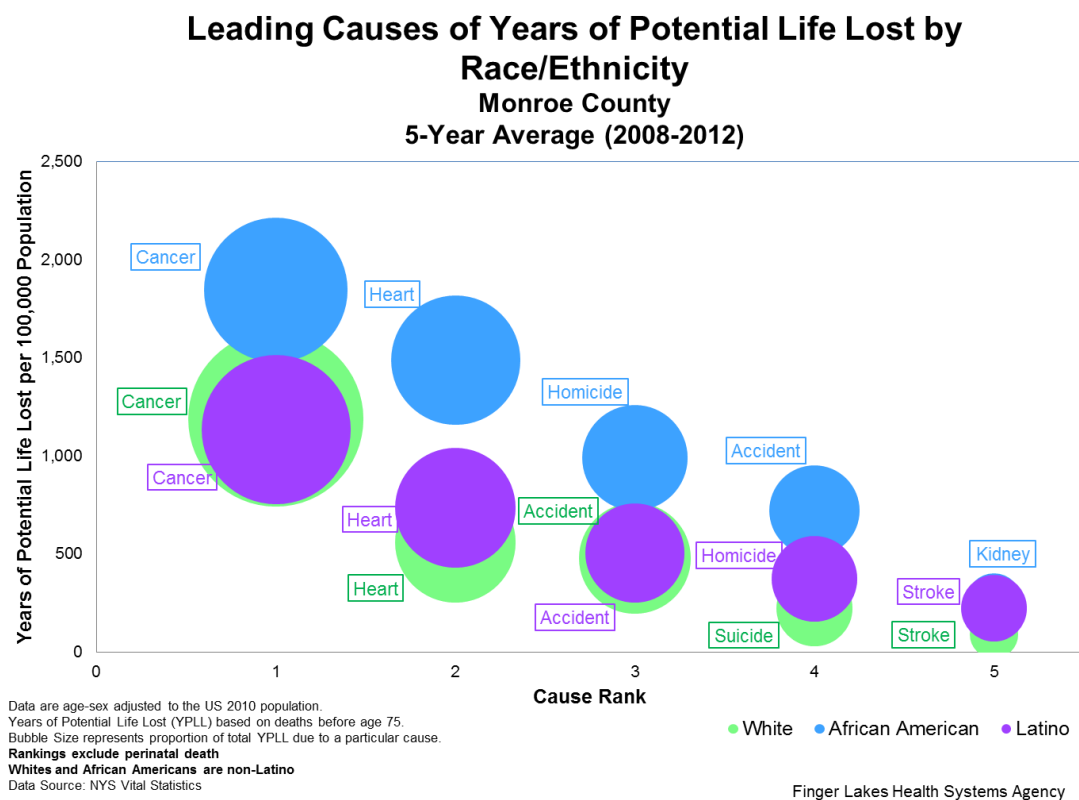
Premature mortality within the county also follows a pattern similar to the one seen at the regional level, with Latinos experiencing a YPLL rate that has consistently been higher than that of Whites and lower than that of African Americans (Figure 11). However, it is interesting to note that the gap between Whites and Latinos is wider at the county level and has seen little improvement since 2005.

Figure 11

Years of Potential Life Lost Due to All Causes
By Race/Ethnicity
Monroe County, 2000-2012
(3 Year Averages)

Years of Potential Life Lost based on deaths before age 75
Rates are age-sex adjusted to 2010 US Population
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics
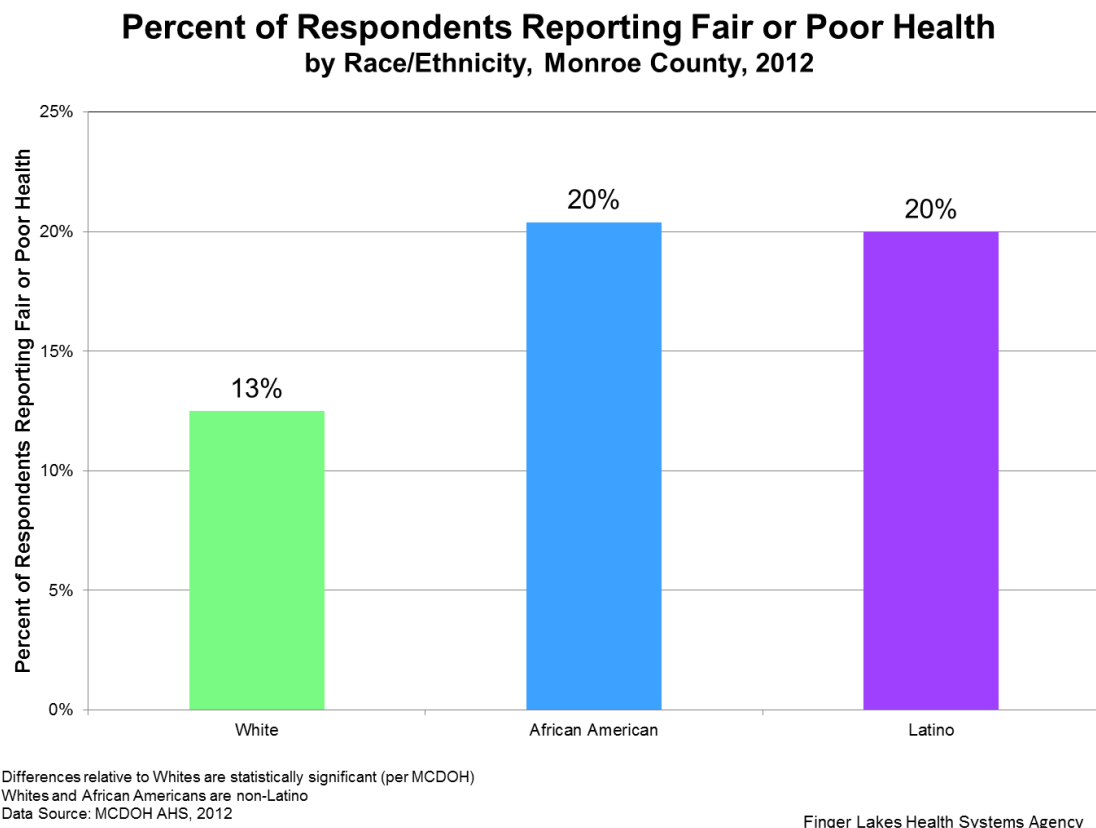
Finger Lakes Health Systems Agency

The top five causes of YPLL for Latinos is unchanged when moving from the Finger Lakes region to Monroe County with one exception: stroke supplants suicide as the fifth leading cause of premature mortality (Figure 12).

Figure 12

Leading Causes of Years of Potential Life Lost by Race/Ethnicity
Monroe County
5-Year Average (2008-2012)

Data are age-sex adjusted to the US 2010 population.
Years of Potential Life Lost (YPLL) based on deaths before age 75.
Bubble Size represents proportion of total YPLL due to a particular cause.
Rankings exclude perinatal death
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics
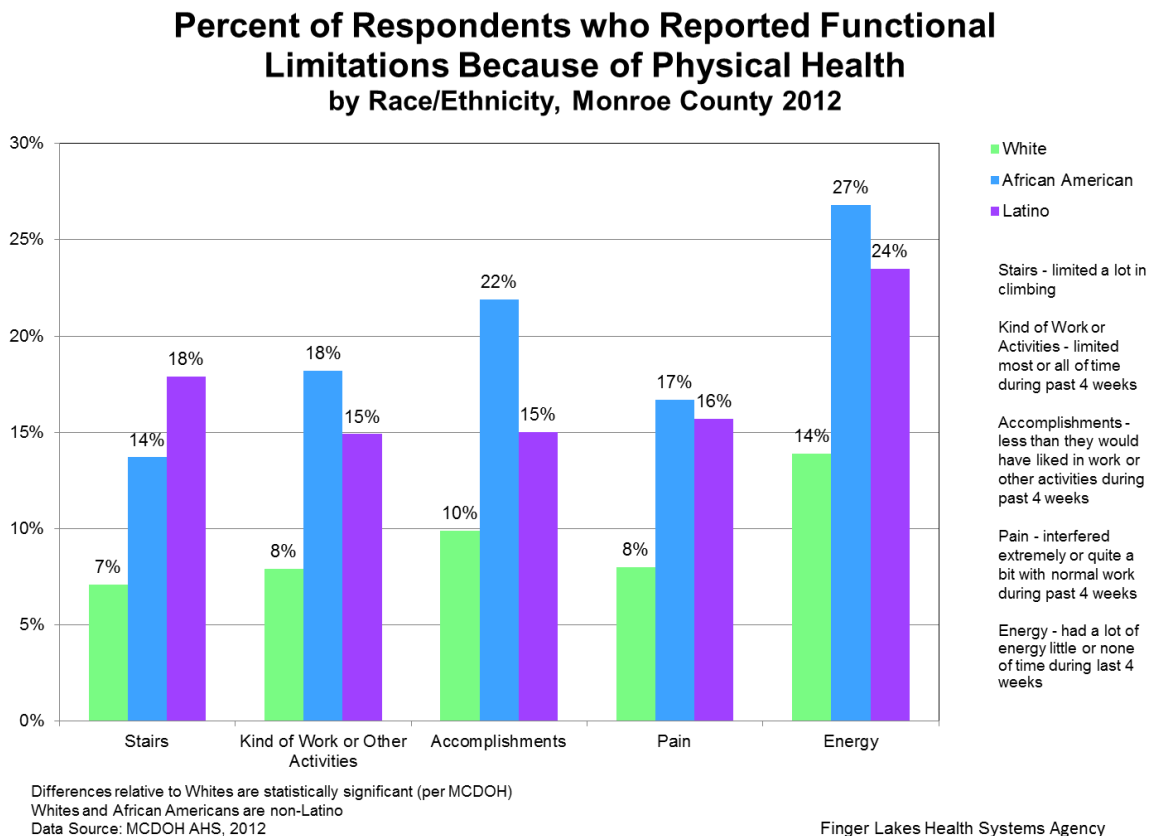
Finger Lakes Health Systems Agency

Additional health outcome indicators obtained from the Monroe County Department of Public Health's Adult Health Survey (AHS) provide greater detail on Latino health within this geography (refer to Appendix B for more information on this data source). In terms of self-perceived overall health status, Latinos are more likely to report fair or poor health as compared to Whites (Figure 13). Although not fully understood, the association of self-related health status with mortality is well-established (Jylhä, 2009), suggesting that these differences in perceived health may have implications beyond a divergence in the quality of life experienced by racial/ethnic groups.

Figure 13

Percent of Respondents Reporting Fair or Poor Health
by Race/Ethnicity, Monroe County, 2012

Differences relative to Whites are statistically significant (per MCDOH)
Whites and African Americans are non-Latino
Data Source: MCDOH AHS, 2012
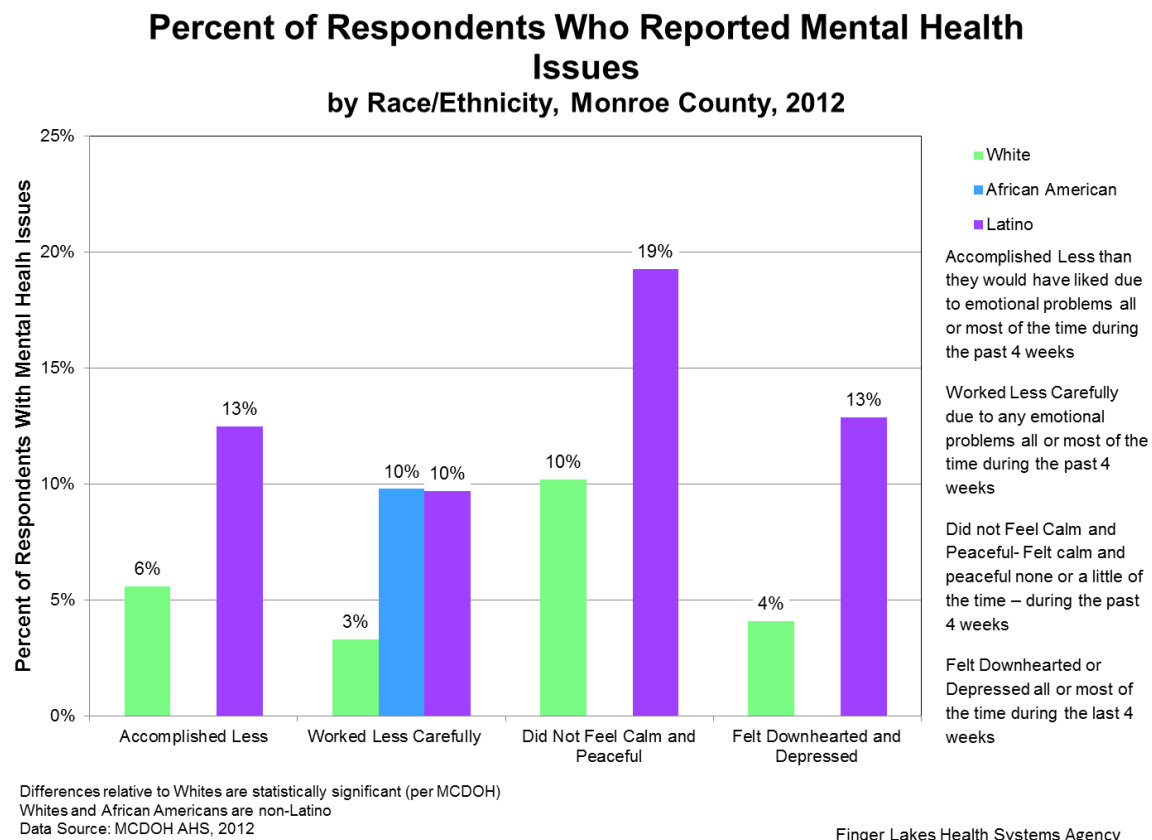
Finger Lakes Health Systems Agency

Similar disparities are seen in terms of one's physical health and resulting limitations in functional ability and activity level. As Figure 14 illustrates, both Latinos and African Americans report greater limitations in terms of stair climbing, the kinds of work or other activities in which they are able to participate, their energy level, and pain.

Figure 14

Percent of Respondents who Reported Functional Limitations Because of Physical Health by Race/Ethnicity, Monroe County 2012

Differences relative to Whites are statistically significant (per MCDOH)
Whites and African Americans are non-Latino
Data Source: MCDOH AHS, 2012

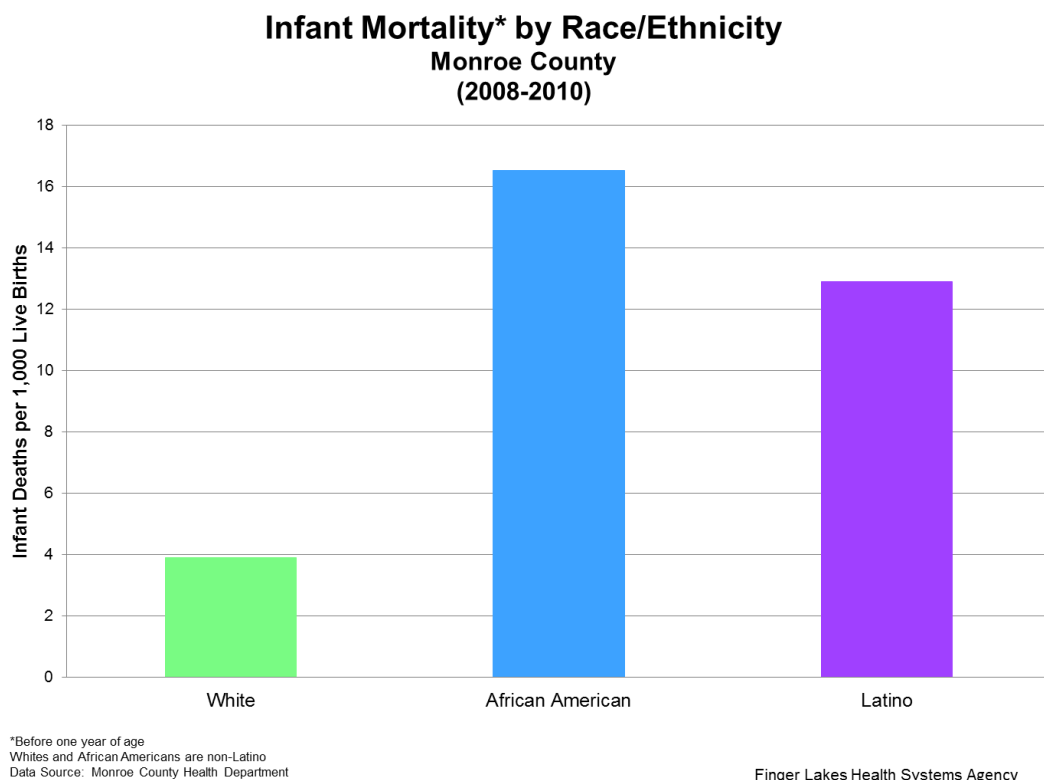Finger Lakes Health Systems Agency

Yet, examples of poor health in the Latino community go beyond physical. Responses to the AHS show that Latinos report some of the highest rates of suboptimal outcomes related to mental health. For instance, almost 20% of Latinos reported that they rarely or never felt calm and peaceful during the past four weeks (compared to 10% of Whites), and 13% reported feeling downhearted or depressed all or most of the time during the previous month (compared to just 4% of Whites) as shown in Figure 15. Thus, Latinos experience a level of mental despair and depression that is clearly worse than Whites in Monroe County.

Figure 15

Percent of Respondents Who Reported Mental Health Issues
by Race/Ethnicity, Monroe County, 2012

Legend:
White
African American
Latino

Accomplished Less than they would have liked due to emotional problems all or most of the time during the past 4 weeks

Worked Less Carefully due to any emotional problems all or most of the time during the past 4 weeks

Did not Feel Calm and Peaceful- Felt calm and peaceful none or a little of the time – during the past 4 weeks

Felt Downhearted or Depressed all or most of the time during the last 4 weeks

Differences relative to Whites are statistically significant (per MCDOH)
Whites and African Americans are non-Latino
Data Source: MCDOH AHS, 2012

Finger Lakes Health Systems Agency

Another key measure of a population's health is birth outcomes. The infant mortality rate (death of baby before age one) is often used as a benchmark of a community's overall health and well-being as many of the factors affecting the health of adults can have profound impacts on the ability of newborn children to develop and thrive ("Infant Mortality," 2012). The federal government has set a national target for 2020 of six deaths per 1000 live births. At the county level, the infant mortality rate mirrors the disparity pattern seen in YPLL: Latinos experience 12.9 deaths per 1,000 live births (well above the aforementioned target rate) compared to 3.9 deaths per 1,000 births among Whites, and 16.5 deaths per 1,000 births among African Americans (Figure 16).

Figure 16

Infant Mortality* by Race/Ethnicity
Monroe County
(2008-2010)

*Before one year of age
Whites and African Americans are non-Latino
Data Source: Monroe County Health Department

Finger Lakes Health Systems Agency

Low birth weight is another important outcome with close ties to infant mortality as it is the number one risk factor for death in the first year of life and for life-long health problems ("Health Pregnancy Fact Sheet," 2006). Rates are higher among children born to Latina mothers than children born to White mothers (Figure 17).

Figure 17

Low-Weight Births* by Race/Ethnicity
Monroe County
(2008-2010)
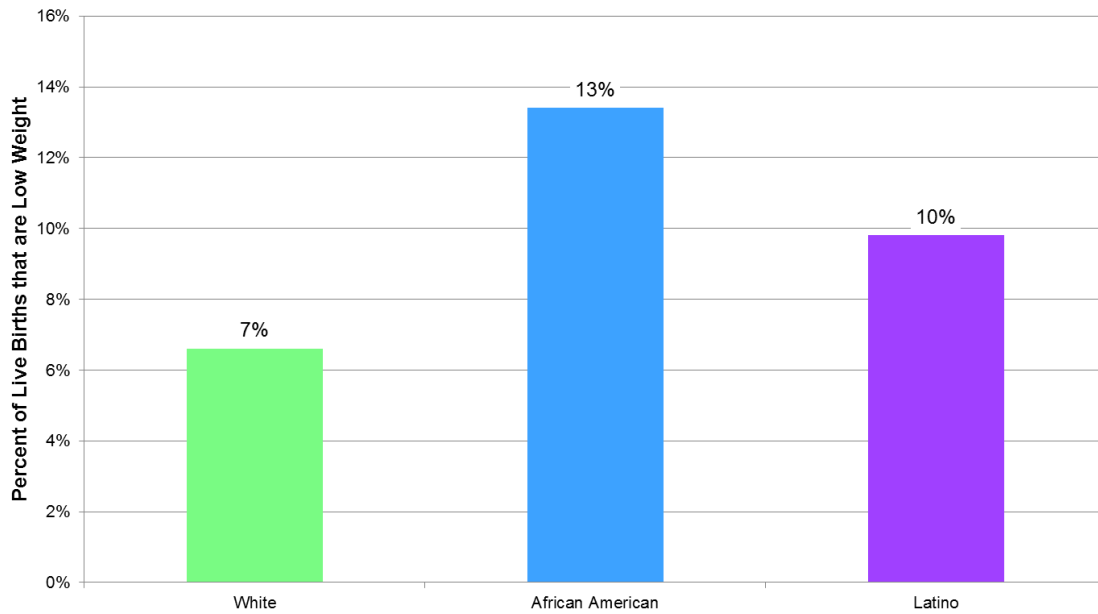
*<2,500 grams
Whites and African Americans are non-Latino
Data Source: Monroe County Health Department

Finger Lakes Health Systems Agency

In total, Latinos in Monroe County appear to experience health disparities in both terminal health outcomes (like premature mortality and infant mortality) and intermediary health outcomes pertaining to functional ability and quality of life. Nevertheless, a county level analysis may not thoroughly describe the health challenges facing minority populations.

Target Area

As previously mentioned, the LHC has identified a Target Area, consisting of three ZIP codes, that deserves special attention due to its concentrations of minority populations, high levels of poverty, and cultural significance for the local Latino community. Utilizing a more focused geography can help isolate a more homogenous population that can yield greater information on the determinants of the current Latino health status. Indeed, a brief examination of the total unadjusted count of YPLL between 2008 and 2010 reveals that the years lost among Latino residents of the Target Area accounted for 47% of the total Latino YPLL in the county and about 38% of the Latino total for the region. With this mind, a closer examination of health outcomes within the Target Area is warranted.

There is considerable evidence that the Target Area contains a high concentration of poor health. For example, residents of the Target Area, regardless of race/ethnicity,[2] are much more likely to report fair or poor overall health (Figure 18), limitations due to physical health status (Figure 19), and limitations due to mental health status (Figure 20). Furthermore, comparing adjusted YPLL rates between the Target Area and the balance of Monroe County demonstrates that Target Area residents experience double the rate of premature mortality compared to those living in the balance of Monroe County (Figure 21).

Figure 18

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[2] Due to sample size limitations, data from the Monroe County Adult Health Survey are not available by race/ethnicity when looking at the Focus Area and the balance of Monroe County. As a result, we are forced to examine survey responses among Focus Area residents without regard to race/ethnicity.

Percent of Respondents Reporting Fair or Poor Health
Status
By Geography, 2012

Differences are statistically significant (per MCDOH)
Focus Area = ZIP codes 14605, 14613, 14621
Data Source: MCDOH AHS, 2012
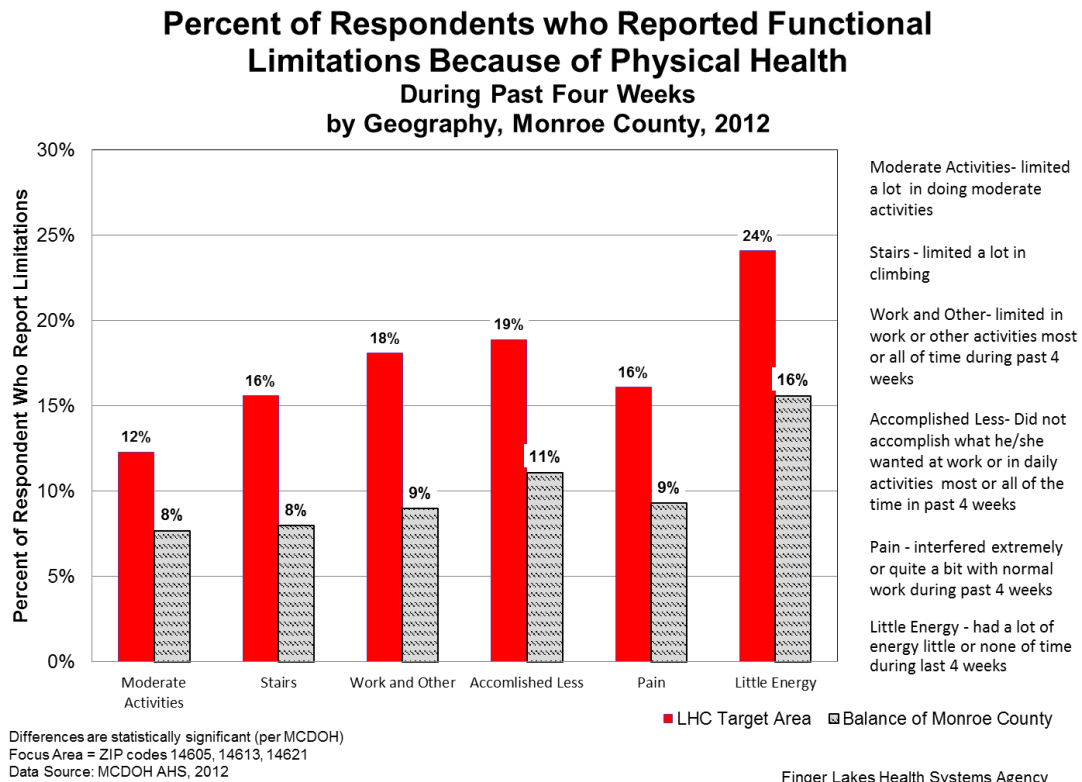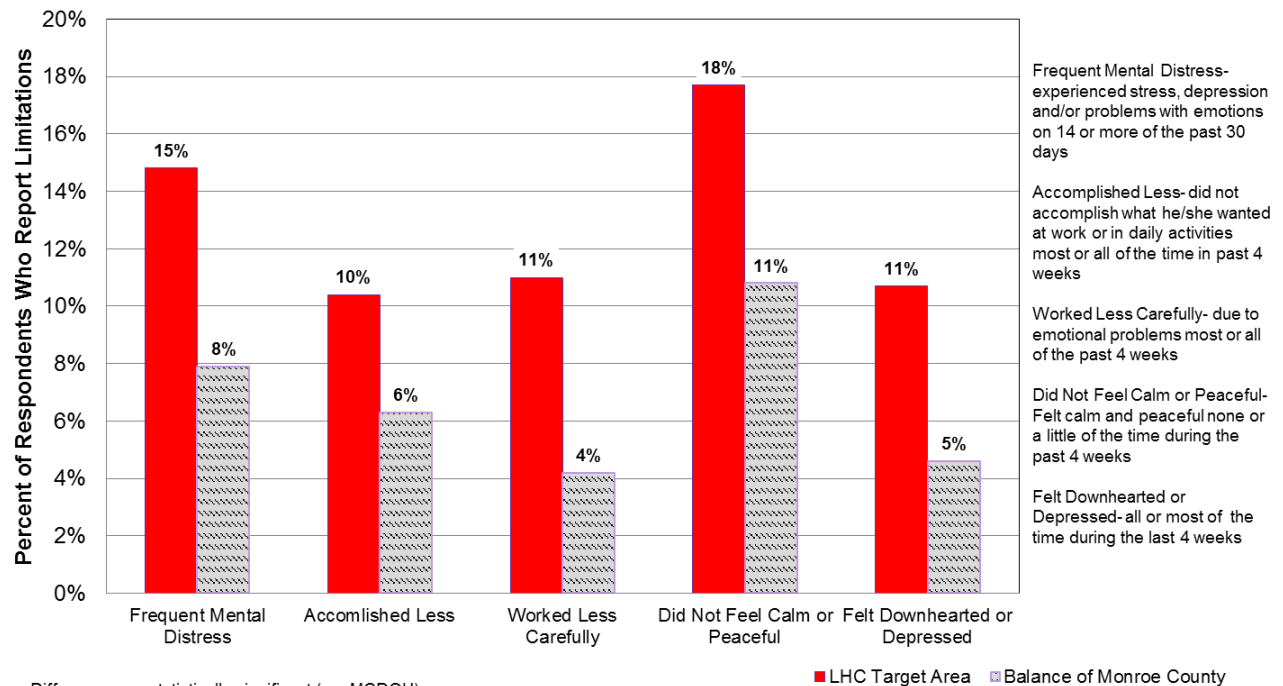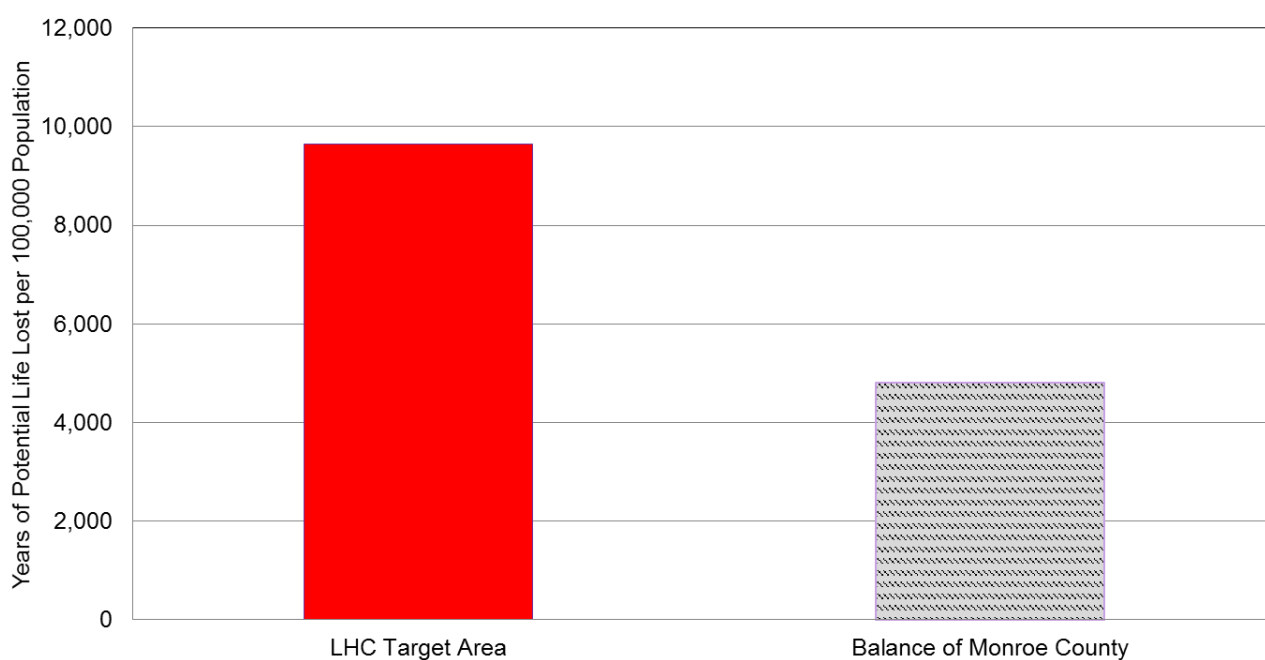
Finger Lakes Health Systems Agency

Figure 19

Percent of Respondents who Reported Functional Limitations Because of Physical Health
During Past Four Weeks
by Geography, Monroe County, 2012

Moderate Activities- limited a lot in doing moderate activities

Stairs - limited a lot in climbing

Work and Other- limited in work or other activities most or all of time during past 4 weeks

Accomplished Less- Did not accomplish what he/she wanted at work or in daily activities most or all of the time in past 4 weeks

Pain - interfered extremely or quite a bit with normal work during past 4 weeks

Little Energy - had a lot of energy little or none of time during last 4 weeks

Differences are statistically significant (per MCDOH)
Focus Area = ZIP codes 14605, 14613, 14621
Data Source: MCDOH AHS, 2012

Finger Lakes Health Systems Agency

Figure 20

Percent of Respondents who Reported Functional Limitations Because of Emotional/Mental Issues
During Past Four Weeks
by Geography, Monroe County, 2012

Frequent Mental Distress- experienced stress, depression and/or problems with emotions on 14 or more of the past 30 days

Accomplished Less- did not accomplish what he/she wanted at work or in daily activities most or all of the time in past 4 weeks

Worked Less Carefully- due to emotional problems most or all of the past 4 weeks

Did Not Feel Calm or Peaceful- Felt calm and peaceful none or a little of the time during the past 4 weeks

Felt Downhearted or Depressed- all or most of the time during the last 4 weeks

Differences are statistically significant (per MCDOH)
Focus Area = ZIP codes 14605, 14613, 14621
Data Source: MCDOH AHS, 2012

Finger Lakes Health Systems Agency

Figure 21

Years of Potential Life Lost By Geography
5-Year Average (2008-2012)

Target Area = ZIP codes 14605, 14613, 14621
Data are age-sex adjusted to US 2010 population.
Years of Potential Life Lost (YPLL) based on deaths before age 75.
Data Source: NYS Vital Statistics

Finger Lakes Health Systems Agency

Taken together, the above graphs illustrate that poor health is pervasive in the Target Area. The issue of health disparities across racial and ethnic groups and geographies is less straightforward. As seen in the Figure 22, Latinos experience the lowest rates of YPLL in the Target Area.

Figure 22

Years of Potential Life Lost
By Race/Ethnicity and Geography
5-Year Average (2008-2012)

Target Area = ZIP codes 14605, 14613, 14621
Data are age-sex adjusted to US 2000 population
Years of Potential Life Lost (YPLL) based on deaths before age 75
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

■ White   ■ African American   ■ Latino
Finger Lakes Health Systems Agency

The above finding suggests that differences in premature mortality between Whites and Latinos living in the Target Area are not the drivers of the ethnic disparities seen at the county or region level. This is not to say that Latinos in the Target Area are doing well; they experience a rate of YPLL that is more than 1.5 times that of Latinos living in the balance of Monroe County. Rather, it appears that the negative effects of the Target Area do not adversely impact Latinos to the same extent as Whites and African Americans living in this geography. It is difficult to explain why this is the case. Given that the number of Latinos living in the Finger Lakes region is considerably smaller than that of Whites and African Americans, estimation errors are always a concern when examining this group. Nevertheless, if we assume that the observed differences are real, it is logical to consider if being Latino has some protective effect within

the Target Area. One hypothesis supported by the LHC is the positive effect of "*los barrios,*" or neighborhoods with large Latino populations and pervasive Hispanic culture. The Target Area contains several of these typically close knit communities, including *La Avenida*, and it is plausible that living in a culturally familiar and supportive environment can offset some of the generally negative features of the Target Area. This explanation will be explored more completely in following chapters.

Regardless of the overall rates of YPLL in the Target Area, important features of the Latino health status can still be gathered by examining the leading causes of YPLL among Target Area residents. Cancer and heart disease remain the two leading causes for Latinos, but homicide has supplanted accidents as the third leading cause. Suicide has again entered the top five for Latinos, perhaps giving some indication of a concentration of mental distress for Latinos living in this region (Figure 23).

Figure 23

Leading Causes of Years of Potential Life Lost by Race/Ethnicity
Finger Lakes Region
5-Year Average (2008-2012)

Target Area = ZIP codes 14605, 14613, 14621
Data are age-sex adjusted to US 2000 population.
Years of Potential Life Lost (YPLL) based on deaths before age 75.
Bubble Size represents proportion of total YPLL due to a particular cause
Rankings exclude perinatal deaths
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

Finger Lakes Health Systems Agency

These findings demonstrate that Latinos face a unique set of challenges to good health. With some exceptions, we often see a health outcome pattern where Latinos experience a greater burden of disease compared to Whites but do better than African Americans. The most notable divergence from this pattern occurs when examining measures of mental health. In this instance, Latinos in Monroe County and residents of the Focus Area suffer the worst outcomes. Explaining the factors that drive these results and prevent Latinos from doing as well as Whites on all measures and at all geographies is a difficult and complicated task. Nonetheless, gaining greater insight into potential root causes is
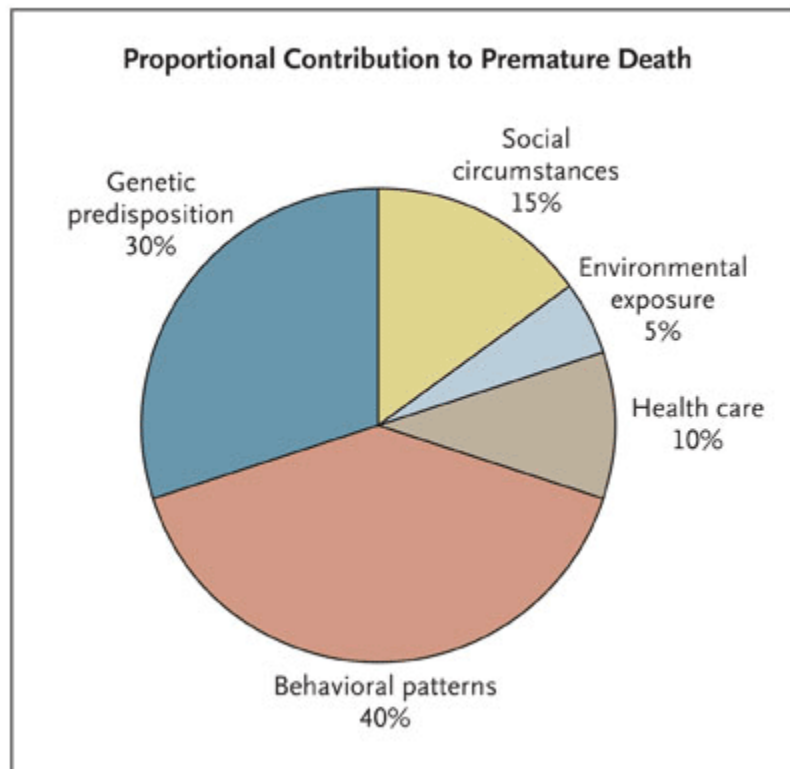
essential to devising strategies to eliminate existing inequalities or simply improving the health of a population.

Variation in rates and leading causes of YPLL across geographies and racial and ethnic groups suggests that one's life experiences may play an important role in elucidating the underlying origins of certain health outcomes. With this in mind, we believe that a thorough examination of the determinants of health (namely, one's living environment, social circumstances, health behaviors, and medical care) across racial and ethnic groups in this community is warranted. A more complete description of each of these determinants is given in the following section.

III.   Determinants of Health

Medical care, by itself, has a limited effect on a population's health. One need look no further than the discrepancy between the amount of medical care Americans receive (first in the world based on percent of GNP spent) and the relatively poor life expectancy in the United States (about 51st among nations). Physician and epidemiologist J. Michael McGinnis and colleagues estimated the contributions to population health of various domains (2002):

Figure 24

Proportional Contribution to Premature Death

Social circumstances 15%

Genetic predisposition 30%

Environmental exposure 5%

Health care 10%

Behavioral patterns 40%

Their estimates suggest a proportionally small contribution from the health care system in comparison to one's genetics, behaviors, and social and physical environments. However, McGinnis argued:

> More important than these propositions is the nature of the influences in play when the domains intersect. Whether a gene is expressed can be determined by environmental exposures or behaviors. The nature and consequences of behavioral choices are affected by our social circumstances. Our genetic predispositions affect the health care we need, and our social circumstances affect the health care we receive (McGinnis et al., 2002).

The LHC embraces McGinnis's framework because it calls attention to the different socio-economic conditions in various neighborhoods within Monroe County, and calls for a community approach that

moves beyond a sole focus on individual behavior and lifestyle. In FLHSA's effort to not just report on health disparities but also to seek factors that can help explain these differences, McGinnis's work will serve as a powerful organizing framework for the balance of this report.

Biology

Genetic predispositions have a strong influence on health; however, it is likely that genetics play a relatively small role in health disparities between races or ethnic groups.

Race and ethnicity are largely social constructs. With a few exceptions they do not genetically distinguish among persons. For instance, after centuries of genetic pressure from malaria in Africa, most African Americans have a two times higher genetic disposition to suffering from sickle cell disease than do Whites. Relatively few diseases demonstrate that level of racial/ethnic disparity.

Even diseases known to have a genetic component to prevalence may have other causes as well. The BRCA1 and BRCA2 genes, known to predispose women to breast cancer, are only present in about 10% of breast cancer cases. As such, differences in genetics are unlikely to explain observed disparities.

Medical Care

Medical care, while playing a minor role in overall population health, remains vital for individuals when they become sick. McGinnis defines optimal medical care as that which is timely and error-free (2002). Therefore, it is important to examine both access (care that is timely) and quality (care that is error free) when evaluating the health care system as a health determinant.

In the United States, access to health care is largely driven by having either publicly or privately financed health insurance. Numerous studies have shown having insurance greatly improves access and affordability of medical care (Baicker et al., 2013; Buchmueller, Grumbach, Kronick, & Kahn, 2005). Greater access may increase the use of preventive services, which can improve one's current health status and halt the development of future chronic conditions, and more consistent use of screening tests that facilitate early disease detection and can improve treatment outcomes.

In addition to shortfalls in insurance coverage, supply-side factors may limit a particular population's access to medical care services. For example, a lack of primary care physicians in the inner-city or in rural regions can place considerable barriers to adequate care that cannot be addressed by health insurance coverage.

Measuring the quality of care delivered is challenging given the datasets available. However, an examination of the types of preventive and screening services received, as well as a review of the adequacy of primary care management of more complex conditions, provides some description of the quality of health care services encountered by various populations.

Physical Environment

Environmental exposures play a substantial role in determining the health of individuals and communities. This category includes the features of the physical environment, including toxic waste, air and water pollution, and lead poisoning, now especially from leaded paint. In rural areas, issues such as lack of sidewalks, accidents from farm equipment and use of chemicals are often key features with direct links to health outcomes.

But there are other, less obvious factors which promote or inhibit a physical environment conducive to good health. Factors include a lack of grocery outlets that carry health-promoting options such as fresh vegetables and low-fat milk products; easy availability of tobacco, alcohol and illegal substances; and lack of green space or safe places to exercise.

Social Environment

McGinnis also categorizes a group of social circumstances that are part of the environment. These circumstances include the stress created by living with low incomes, urban crowding, and crime or fear of crime. They include living with the constant pressure of being subjected to racism or alternatively the supportive influence of spiritualism. They also include children being raised with a single parent or a grandparent, young boys without adult male role models, and/or communities missing substantial numbers of young men due to incarceration. These types of social environmental influences may be measured by persons admitting to frequent mental distress or by the internalized stress that results in higher allostatic loads (the body's physiologic response to periods of high stress), which contribute to greater "wear and tear" on the body and depletion of one's physical health (Juster, McEwen, & Lupien, 2010). They also can be exhibited more generally as lower self-assessment of overall health.

Behavior

As noted by McGinnis and colleagues, health-related behaviors may be the single largest influence on one's health, in both positive and negative ways. The California-based Milkin Institute estimated that a "modest" but "optimistic" improvement of specific prevention and health-related behaviors would reduce the incidence of seven major chronic diseases in the United States by 40 million cases (from 230 million to 190 million) between 2003 and 2023, compared to present trends (DeVol et al., 2007).

Much of health is self-managed, whether it involves deciding if an illness or injury requires professional medical care or deciding to undertake a physical activity rather than watching TV. Many behaviors that put health at risk are also self-managed. However, it would be a mistake to conclude that individuals are solely responsible for their own bad health through risky behaviors. As previously noted, the determinants of health often have their effect where they intersect, such as genetics and behaviors. It is easy to blame the victim, but the direct causal pathway between one's behavior and health outcomes is unclear.

Behaviors thought to have negative consequences on health include smoking, excess alcohol consumption, poor diet, lack of physical activity, excess weight, and illicit drug use. Reductions or elimination of these factors are considered positive behaviors. Periodic monitoring of health by professional health practitioners is generally thought to be a positive behavior.

Synergy of Effects

The pathways to good health are complex. It is difficult to tell what is "causative" of positive or negative health status.

For instance, a combination of conditions known as the "metabolic syndrome" is associated with elevated risk of heart disease, stroke, and diabetes. The syndrome is an example of how behaviors, genetics, environment, and medical care can work together to affect health. Risk factors for metabolic syndrome include stress, overweight and obesity, sedentary lifestyle, aging, high cholesterol, insulin resistance, high blood sugar levels, high blood pressure, and systemic cellular inflammation. Some of these factors are closely tied to genetics that inherently make an individual more likely to develop the syndrome. Others can be changed with assistance from health practitioners, for instance through medications to reduce cholesterol, blood sugar and blood pressure levels. Additionally, some risk factors can be changed by individuals, often with support, through behavior changes like weight loss, dietary modifications, and changes in physical activity levels. The environment, both social and physical, likely plays an important role in determining how easy or difficult it is to implement such changes.

There is considerable variation in the measures of determinants across geographies. However, as will be seen in subsequent sections, many of the adverse measures are more "negative" in the Target Area, and many more adverse conditions occur simultaneously in the that space. As a result, Target Area residents experience an environment that may be conducive to the development of chronic conditions with multiple comorbidities and prohibitive to successful management of such a challenging health state.

In the following sections of the report will illustrate differences in in physical environment, social circumstances, behavior, and medical care access. Biological differences will not receive close scrutiny in light of the arguments mentioned previously: genetic differences are not believed to account for the substantial racial and ethnic health disparities, and one's genetics are by and large un-modifiable. Differences in the remaining four categories will be examined to see if they provide insights into potential solutions to observed disparities in health outcomes among this community's Latino population.

IV.   Environment

A growing body of evidence suggests that the neighborhood in which one lives can have substantial impacts on health outcomes in both a positive and negative direction (Diez Roux & Mair, 2010). While issues of self-selection (where healthier and/or more advantaged individuals choose to live in more amenable communities) are an eminent challenge to examining this issue, it appears likely that physical surroundings do exert a degree of influence on one's well-being. For instance, researchers have found a relationship between the built environments (i.e., community layouts, transportations options, proportion of green space, and population densities) and the amount of physical activity in which a community engages (McGinn, Evenson, Herring, Huston, & Rodriguez, 2007). The retail environment can also affect health by restricting access to healthy foods while keeping unhealthy goods, such as junk food, tobacco, and alcohol, readily at hand (Moore, Roux, Nettleton, & Jacobs, 2008; Novak, Reardon, Raudenbush, & Buka, 2006; Scribner, Cohen, & Fisher, 2000). There is also evidence that the mere condition of an environment can contribute to negative health outcomes. Specifically, a 2003 study found higher levels of deterioration in the physical structure of a neighborhood (as measured by the number of boarded-up or vacant houses) was a significant predictor of premature mortality after controlling for a variety of other explanatory factors (Cohen et al., 2003). In other words, simply living in a run-down and neglected physical environment may be bad for your health for reasons beyond the obvious exposure to potential toxins like lead paint or pollution.

As demonstrated in the Health Outcomes chapter, poor health, regardless of one's race or ethnicity, is elevated in the Target Area. Features of the physical environment in this region may contribute to such geographic disparities.

Toxic Waste

The U.S. Environmental Protection Agency (EPA) defines "brownfields" as abandoned, idled or under-used industrial and commercial facilities where expansion or redevelopment is complicated by real or perceived environmental contamination (2013). Brownfields may pose health hazards to the neighboring populations. A study found that communities in Baltimore near zones with many brownfields experienced statistically higher mortality from cancer and respiratory diseases, compared to areas with few brownfields after adjusting for a number of other known risk factors (Litt, Tran, & Burke, 2002).

As seen in Figure 25, there are environmental cleanup sites throughout Monroe County, but the highest concentrations are often clustered near and in low-income neighborhoods, including the Target Area.

Figure 25
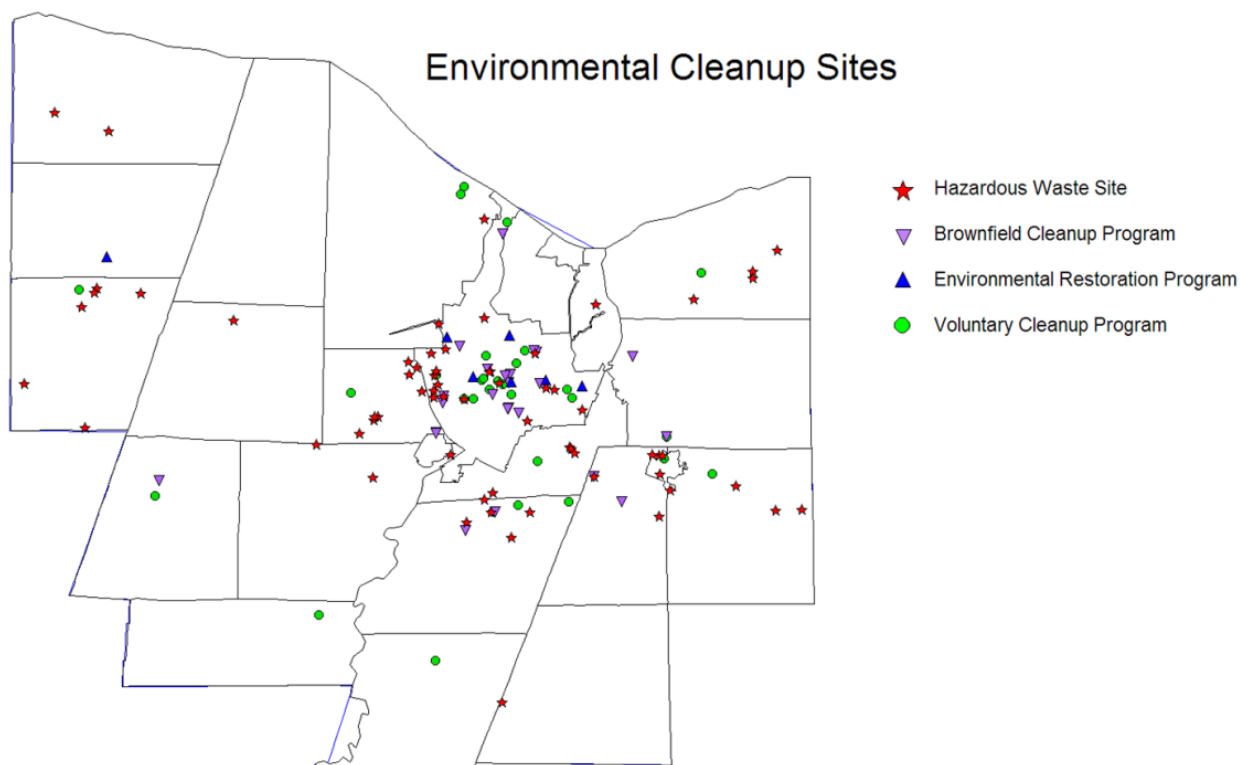
Source: New York State Department of Environmental conservation, Division of Environmental Remediation, GIS data base, www.dec.ny.gov/imsmaps/facilities/viewer.htm

 Lead

The largest cause of lead exposure is lead-based paint and lead-contaminated dust found in deteriorating pre-1978 buildings. Particularly dangerous to children before the age of two, lead is a neurotoxin that causes serious health risks in both children and adults including permanent brain damage, behavior issues, hearing loss, kidney damage, and high blood pressure. The city of Rochester has by far the highest percentage of housing with lead hazards in the region. At 16%, it's a proportion above what is found in the Bronx or Brooklyn. The majority of the region's housing units with lead hazards – 56% or 13,890 units – are found in Rochester.

The economic burden of lead poisoning is substantial. Lifetime costs (in terms of lost wages only) for a national cohort of children who experienced lead poisoning during one year is estimated to be $43 billion (Landrigan, Schechter, Lipton, Fahs, & Schwartz, 2002).   Some research suggests that the psychological damage caused by exposure to lead during childhood may lead to violent criminal

behavior in adulthood, creating additional costs for society (Reyes, 2007). Fortunately, the number of children in Monroe County with reported blood lead levels of 10 µg/dl (or micrograms per deciliter) or higher– dropped 81% between 2001 and 2011 (Table 1).

Table 1

Blood Lead Testing–Percent Testing Positive for Lead Poisoning*												
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
% Positive	12.5%	9.4%	8.9%	9.1%	7.4%	6.5%	4.5%	3.9%	2.9%	2.6%	2.0%	2.3%	1.6%

*Of the Children tested <= 6 years at time of test with blood lead levels >=10 micrograms (µg) per deciliter of blood
Source: Monroe County Department of Public Health

While significant progress has been made in the reduction of lead poisoning, it is important to note that the 2011 result is the equivalent of ten kindergarten classrooms filled with lead-poisoned children. And, if the ug/dL threshold recently issued by the Centers for Disease Control (CDC) is used, the number of children considered lead poisoned would revert to 2001 levels. Further, if one looks at test results from previous years, there are presently 8,766 children in Monroe County schools struggling with the many negative health effects of being lead poisoned, such as loss of intellect, hyperirritability, poor impulse control, and a seven times greater risk of dropping out of school.

The burden of lead poisoning is not distributed evenly across Monroe County as the rate of lead poisoning is much higher in the Target Area compared to the balance of the county. The rate of children with blood lead levels above 10 µg/dl, as a rate per 1000 children in the 2009 birth cohort (age 1 in 2010), is 117 in the Target Area vs. 26.4in the rest of the county, a greater than four-fold difference.

Retail Environment

The retail environment for residents of the Target Area differs drastically from the types and quantities of stores available to non-Target Area residents of Monroe County. These differences are perhaps best represented by the Target Area's lack of full-service grocery stores and their selection of fresh foods and healthy meal options coupled with the wide availability of corner convenience stores whose shelves are often filled with nutrient-poor processed foods, tobacco products, alcohol, and lottery offerings. Estimates vary, but records identify approximately 350 convenience store locations within the city limits. That number equals ten stores for every square mile of land and a 15% increase in the number of such stores since 2005 (Sharp, 2012). As Figure 26 demonstrates, these types of stores are highly concentrated in much of the Focus Area.
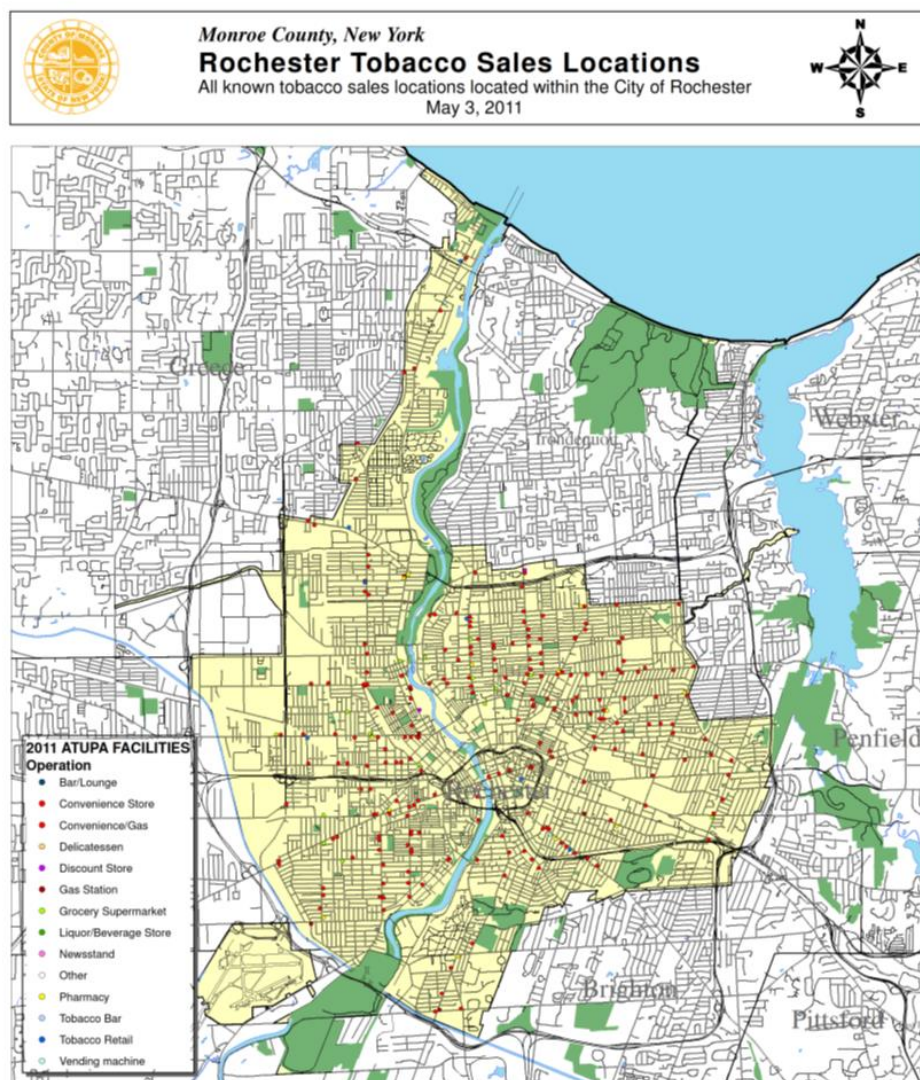
Figure 26
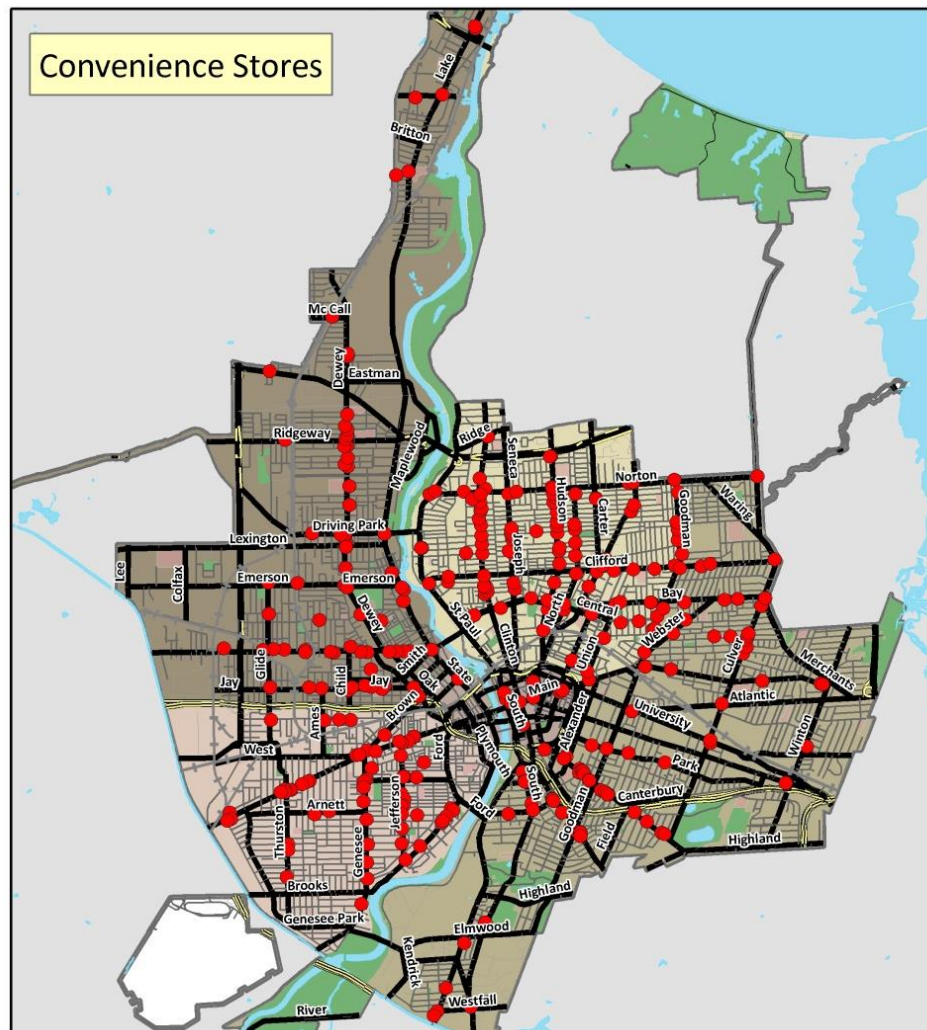
Anecdotally, the corner store has become the location in which drugs dealers loiter outside and illegal or single cigarette sales, food stamp fraud, and other illicit activity have become just part of "doing business" (Sharp, 2012). In 2011, Rochester police responded an average of 21 times to every corner or convenience store. Of those, an average of 62% were drug-related calls. The 25 worst stores averaged 80 police calls, of which more than 36 were drug-related (Sharp, 2012). This demonstrates a high level of illegal activity that has the potential to contribute to a deterioration of the safety and desirability of a neighborhood while increasing the stress of living in such an area.

Beyond the potential for illegal activities at these stores, the products they sell are cause for concern. Given that they primarily sell calorie-dense foods with little or no nutritional value (Farley et al., 2009), it is unreasonable to expect that these retail outlets can serve as the primary source of groceries for a community filled with residents who have limited access to private transportation.

In contrast to the limited access to fresh healthy food choices, unhealthy products are in abundance. For instance, The Target Area, with only about 8% of the county's household population, contains over 20% of the establishments with tobacco licenses in the county and almost one quarter of the county's convenience stories with tobacco licenses (Monroe County Department of Public Health). Figure 27 shows the location of licensed Tobacco Outlets in the city of Rochester, further illustrating the high concentration of locations where cigarettes and other tobacco products can be purchased in the inner-city portions of Rochester.

Figure 27

Monroe County, New York
Rochester Tobacco Sales Locations
All known tobacco sales locations located within the City of Rochester
May 3, 2011

2011 ATUPA FACILITIES
Operation
- Bar/Lounge
- Convenience Store
- Convenience/Gas
- Delicatessen
- Discount Store
- Gas Station
- Grocery Supermarket
- Liquor/Beverage Store
- Newsstand
- Other
- Pharmacy
- Tobacco Bar
- Tobacco Retail
- Vending machine

Given the existing literature linking retail tobacco outlet density with the prevalence of smoking in adults (Novak et al., 2006) and the initiation of smoking in children (Henriksen, Schleicher, Feighery, & Fortmann, 2010), one would expect to see higher rates tobacco use in the Target Area. This relationship will be explored in the following chapter.

A similar relationship between the number of stores selling alcohol and drinking behaviors has also been documented (Scribner et al., 2000). Here again, we must expand our examination beyond corner stores in order to fully ascertain the availability of alcohol in our geographies of interest. New York State licenses businesses for sale of alcohol either "on-premises" (e.g., restaurants and bars) or "off-premises" (grocery or corner stores). Generally, the urban counties, while having the most outlets numerically, have the lowest number of outlets per population, while the less populous/less dense rural counties have the highest rate of outlets per population. The analysis appears to be affected also by wineries in the Finger Lakes communities. Of concern, however, is the high rate of outlets in the inner city of Rochester, compared to suburban areas (Figure 28). Given the previously cited literature, there is reason to suspect that city of Rochester and Target Area residents may be susceptible to the influence of the myriad places to purchase and consume alcohol. Here again, data presented in the following chapter will be used to examine whether higher rates of alcohol consumption do, in fact, exist in the Target Area.

Figure 28

Active Liquor Licenses per 10,000 Population
Finger Lakes Region 2008, by Zip Code
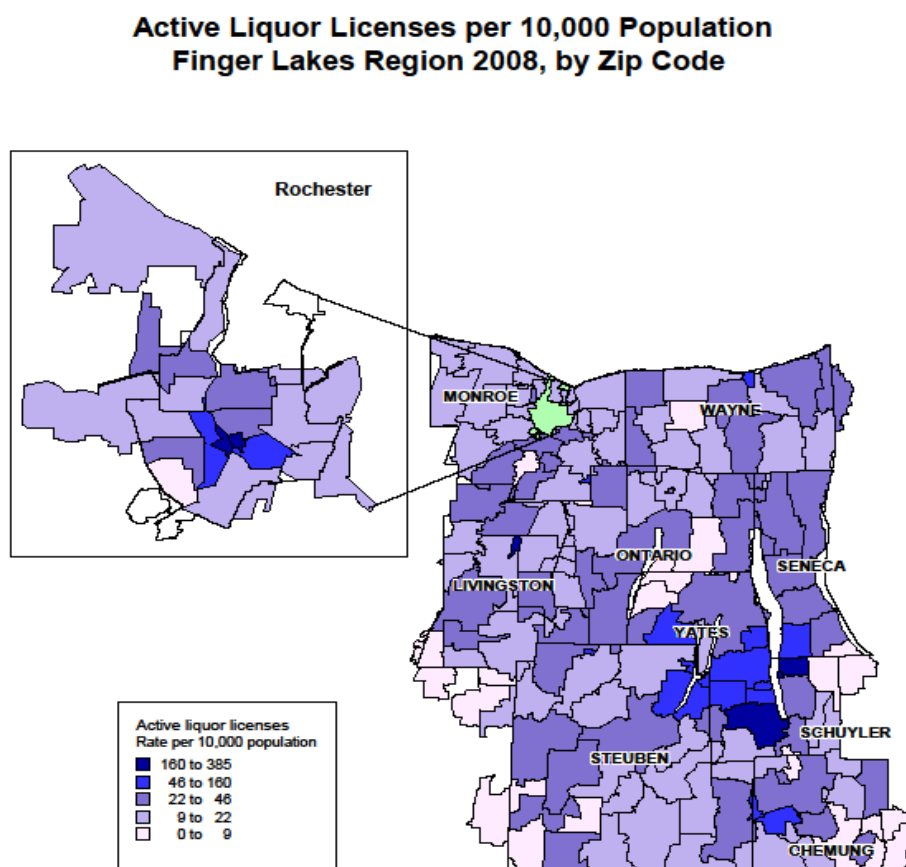
By all the measures considered—toxic wastes, lead paint, safety, and the retail environment— it appears that the City of Rochester, and more specifically the Target Area, has physical environment characteristics that create strong potential barriers to good health.

V.   Social Circumstances

A large body of literature demonstrates that a distinct social gradient in health status and health outcomes exists both in the U.S. and on a global scale: those of higher socio-economic status (SES) tend to live longer and experience better health (Marmot, 2005). The potential explanations for this relationship are varied. The chronic stress of living in an impoverished environment with limited financial and social resources is thought to have significant deleterious effects on health over time (Baum, Garofalo, & Yali, 2006). The higher levels of education associated with higher SES have also been identified as the key pathway to better health due to improved decision making about health behaviors and the use of medical care (Ross & Wu, 1995). Other explanations focus primarily on poverty as the main explanatory component as greater wealth typically improves access to a variety of health improving resources including better housing, working conditions, medical care, and social support (Feinstein, 1993). While the exact mechanisms through which one's social circumstances affects health remain open for debate, it appears that in combination these factors play a key role in the health outcomes of individuals, families, and populations.

Measuring SES can pose a challenge given its multifaceted and abstract nature. While certain factors, such as income and education, are highly correlated with an individual's relative SES, other measures provide a better picture of the daily social environment. An evaluation of housing tenure, family composition, occupation, or housing expenses as a proportion of income can all provide valuable insight. With this in mind, the Finger Lakes Health Systems Agency has created a composite measure of SES within a given ZIP code that aggregates many of the factors mentioned above into a single number[3]. The result is an SES score that ranges from 1 (low SES) to 5 (high SES). The SES scores of Monroe County ZIP codes are represented in Figure 29.
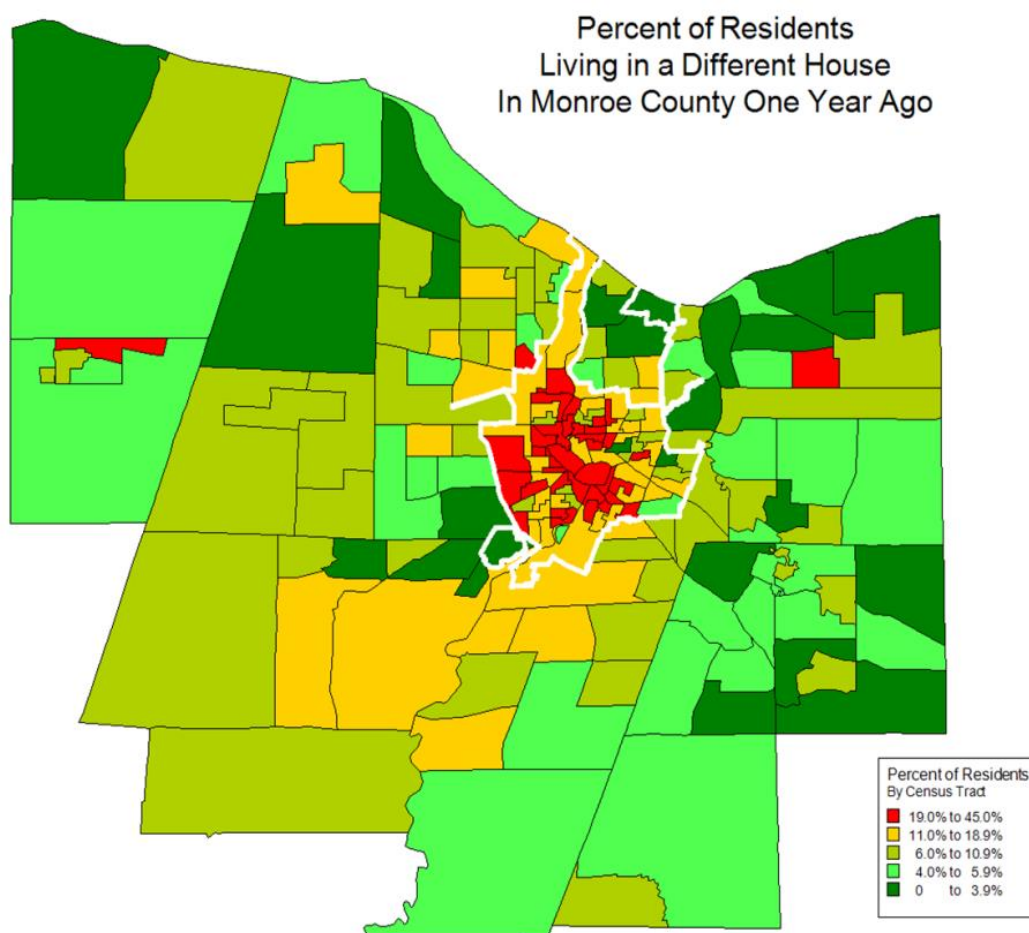
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[3] The measure includes average income, average level of education, occupation composition, average value of the housing stock, age of the housing stock, a measure of population crowding, percentage of renter-occupied housing, percent of persons paying more than 35% of their income on housing, and percent of children living in single-parent households. Each ZIP code in upstate New York (New York State less New York City and the surrounding suburbs) is then ordered on this number, and an SES score is assigned based on the following thresholds: the lowest and highest SES score each contain 15% of the upstate population, the middle score represents 30% of the population, and the remainder is evenly split between SES scores 2 and 4.

Figure 29

SES 2010 by ZIP Code
Monroe County

SES Index - 2010
5 - High
4
3
2
1 - Low
Not Included
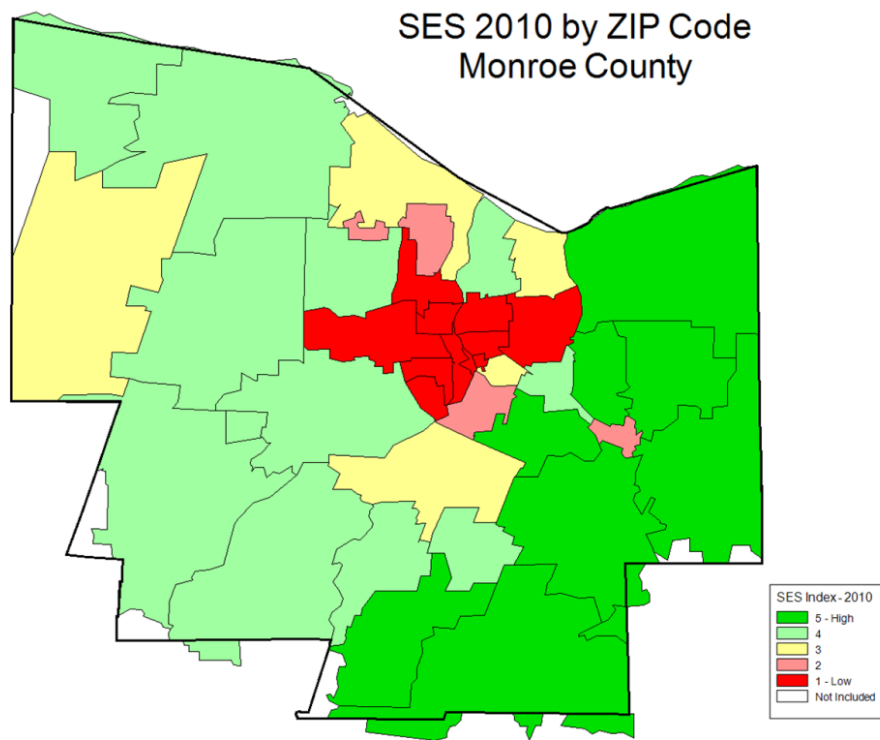
One feature of SES that is not captured directly by the SES indicator is the impact of social connections. This intangible construct is challenging to measure, but given the documented importance of having adequate social relationships that can provide support and positive interaction to health (Campbell, Marsden, & Hurlbert, 1986; Holt-Lunstad, Smith, & Layton, 2010), it is worthy of special consideration. The map in Figure 30 details how much of the population living within a given census tract in 2010 lived in a different house somewhere in Monroe County the previous year. High levels of housing turnover or "churn" likely impede the development of strong relational resources and community networks, potentially leading to the social isolation of the residents living in these areas.

Figure 30

Percent of Residents
Living in a Different House
In Monroe County One Year Ago

Percent of Residents
By Census Tract

- 19.0% to 45.0%
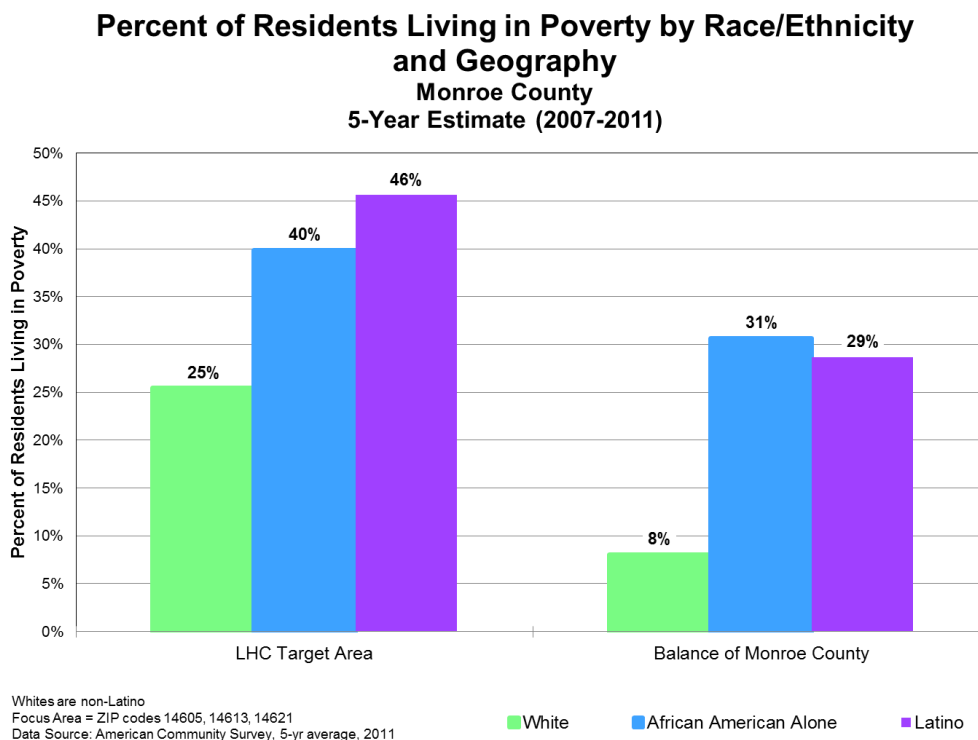- 11.0% to 18.9%
- 6.0% to 10.9%
- 4.0% to 5.9%
- 0   to 3.9%

Data Source: 2010 Census

One of the most striking features of these two maps is the large amount of social inequality present in this relatively small community. Many of the suburban areas have SES rankings in the highest 15%, while the majority of the city ranks in the lowest 15%. Also of note is that all of the Target Area ZIPs have SES rankings of 1, meaning that the residents of this area are among the lowest 15% of all ZIP code populations in Upstate N.Y. in terms of social circumstances. Additionally, the social networks in the Target Area may suffer from considerable instability as much of this region includes census tracts in which 19% or more of residents lived in Monroe County but in a different house the year before. These findings imply that our region is socially segregated. On average, Target Area inhabitants have life experiences that are drastically different from those living in ZIP codes with an SES score of five: affluence is replaced by poverty, home ownership is supplanted by renting from an older and often dilapidated housing stock, higher education is the exception not the norm, and those with jobs typically work in physically demanding occupations marked by low pay and limited benefits.

Differences in social circumstances, however, are not fully explained by where an individual lives. There is considerable evidence indicating that one's ethnicity also plays a significant role in predicting SES. In Monroe County, Latinos fare worse on almost any measure of SES compared to Whites. What's more, Latinos in the Target Area frequently have the worst scores on many SES indicators.
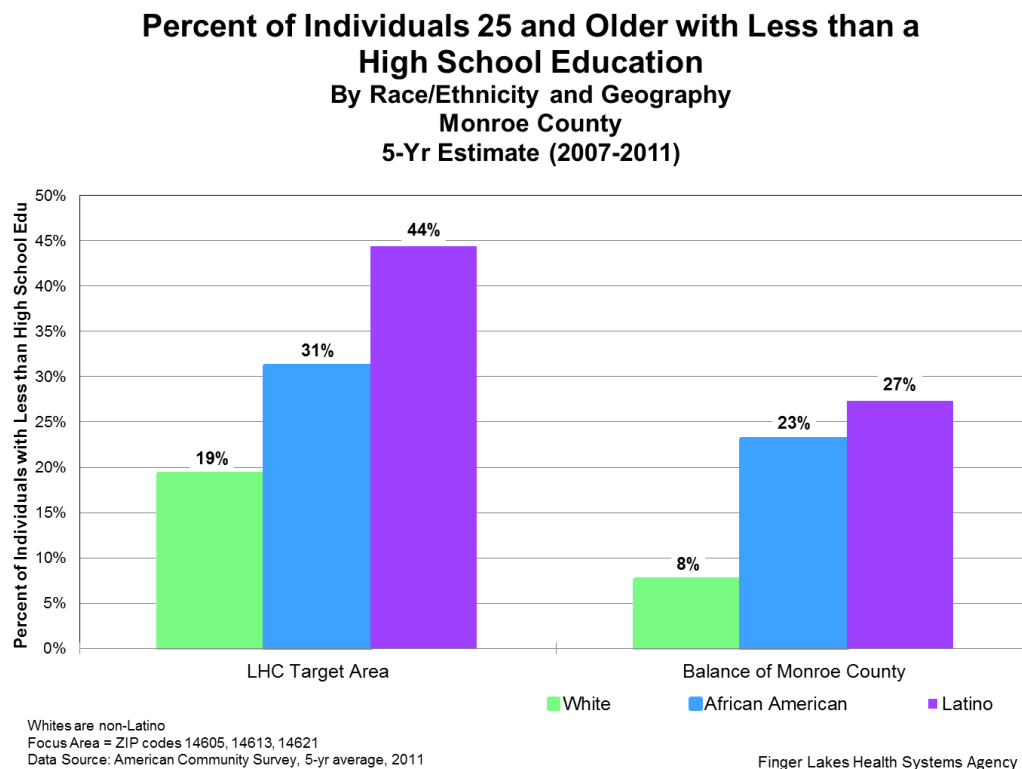
A clear example of this pattern can be seen in an isolated measure of poverty. Outside the Target Area, about 29% Latinos have incomes that fall below the federal poverty level compared to 8% of Whites. Inside the Target Area, Latinos experience the highest percentage of poverty with 46% of this group falling below the threshold (Figure 31).

Figure 31

Percent of Residents Living in Poverty by Race/Ethnicity and Geography
Monroe County
5-Year Estimate (2007-2011)

Whites are non-Latino
Focus Area = ZIP codes 14605, 14613, 14621
Data Source: American Community Survey, 5-yr average, 2011

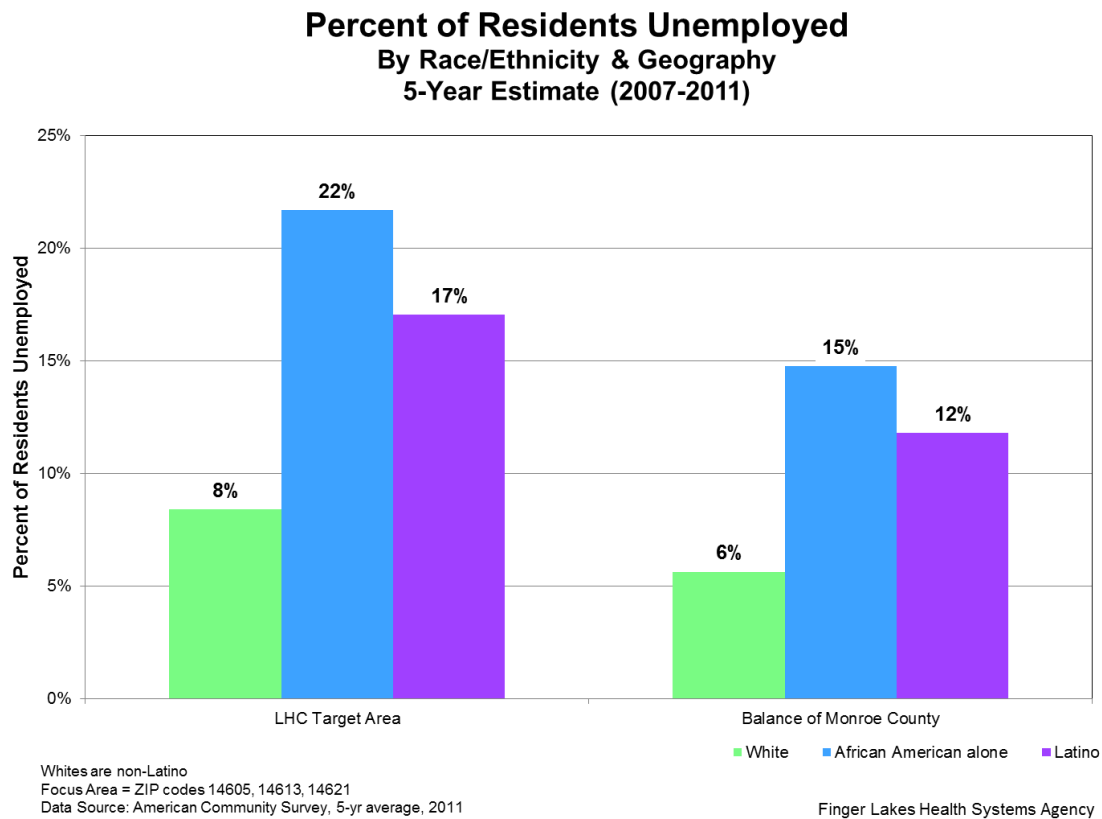■ White   ■ African American Alone   ■ Latino

A similar pattern emerges in terms of education. About 27% percent of Latinos living in the balance of Monroe County have less than a high school education while only about 8% of Whites in the same geography report this level of schooling. Meanwhile, 46% of Latinos living in the Target Area have failed to complete high school, the highest such rate of the three racial/ethnic groups (Figure 32).

Figure 32

Percent of Individuals 25 and Older with Less than a High School Education
By Race/Ethnicity and Geography
Monroe County
5-Yr Estimate (2007-2011)

Whites are non-Latino
Focus Area = ZIP codes 14605, 14613, 14621
Data Source: American Community Survey, 5-yr average, 2011

Finger Lakes Health Systems Agency

It is interesting to note that despite experiencing the highest rates of poverty, Latinos appear less likely than African Americans to be unemployed (Figure 33). The reason for this apparent discrepancy is unclear given that employment rates are not calculated for the entire population, but rather for those considered to be in the workforce. Yet, it is possible that this pattern is an example of the working poor phenomenon where individuals are unable to secure employment that pays enough to move his or her family above the poverty threshold. The low levels of education reported by Latinos, particularly those in the Target Area, could inhibit someone from obtaining a livable wage.

Figure 33

Percent of Residents Unemployed
By Race/Ethnicity & Geography
5-Year Estimate (2007-2011)

Whites are non-Latino
Focus Area = ZIP codes 14605, 14613, 14621
Data Source: American Community Survey, 5-yr average, 2011

Finger Lakes Health Systems Agency

Another key component of the social environment that can have a direct impact on health is the frequency with which one experiences crime and violence. The city of Rochester is marked by high rates of both of these detrimental features. According to County Health Rankings and Roadmaps, Monroe County experienced 387 violent crimes per 100,000 population between 2007 and 2009, a rate which was below the state average of 399 ("Violent Crime Rate- Monroe County," 2011). Within the city of Rochester, however, the violent crime rate has been estimated to be over two times that rate (917 crimes per 100,000 population according to Rochester Police Department calculations). The map in Figure 34 indicates that the preponderance of crime is concentrated in select geographies, including significant portions of the Target Area.

Figure 34

2012 Rochester Violent Crime Rate by Census Tract (per 1,000 persons)
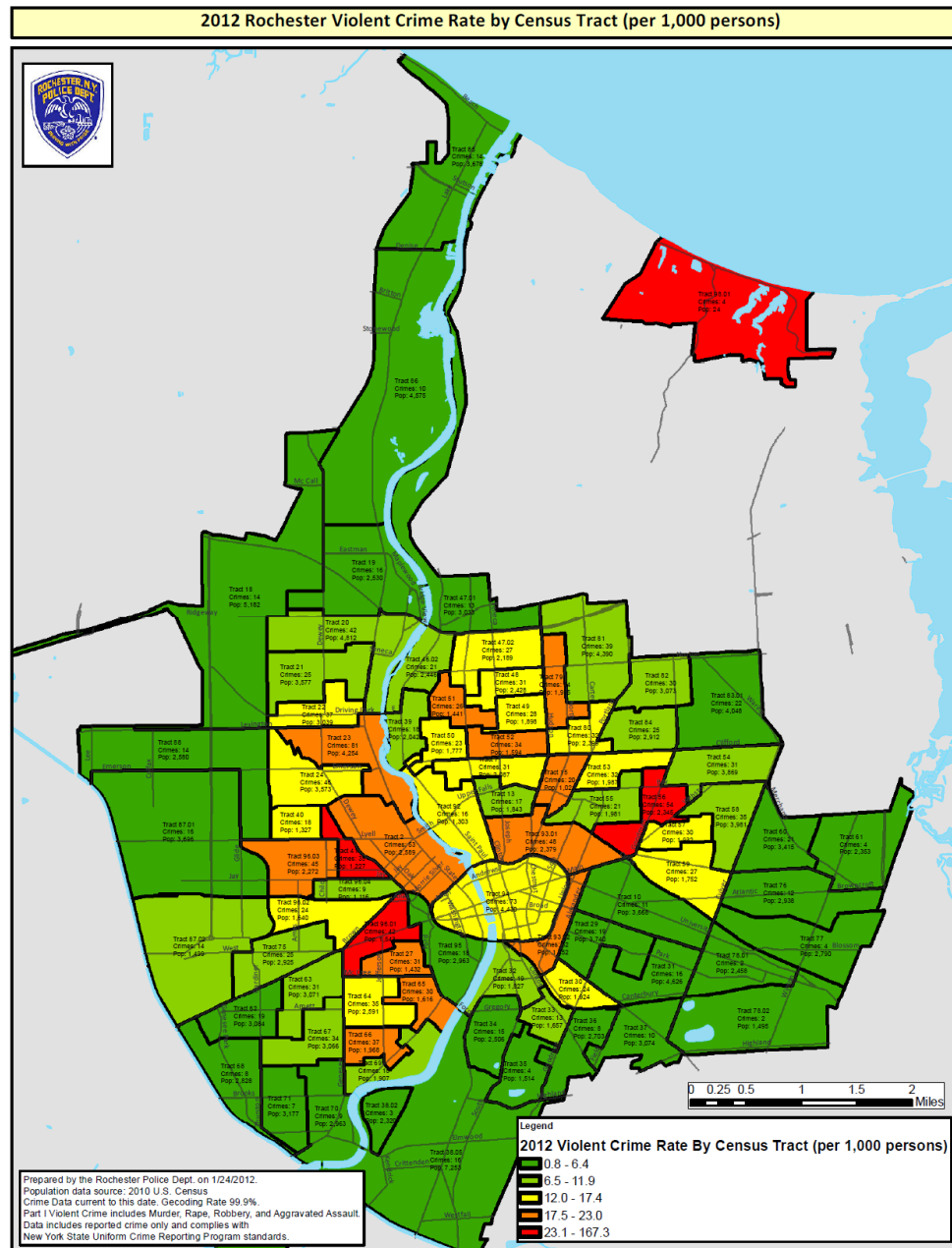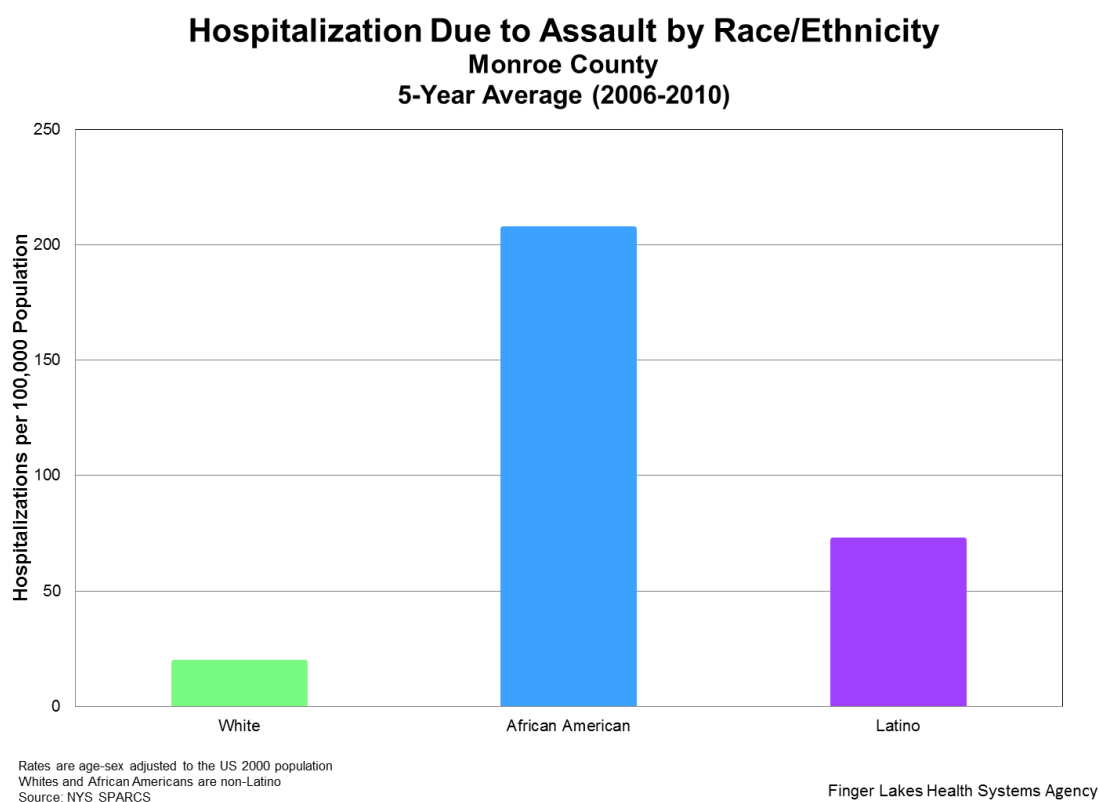
Living in an environment marked by violence is believed to result in higher stress levels that increase one's risk for poor health (Ewart & Suchday, 2002). This relationship may help explain the higher rates of mental health issues reported for Target Area residents. Indeed, a recent survey of residents of the

HOPE community[4] found that only one-third of respondents felt very safe outdoors during the day and less than one-quarter felt very safe outdoors at night (Project HOPE, 2012), giving some indication of just how insecure living in such an environment can feel.

It does not appear, however, that exposure to this violence is equally distributed across racial and ethnic groups. Specifically, homicide is the third leading cause of YPLL for both African Americans and Latinos in the Target Area, compared to the fifth leading cause for Whites. Additionally, both African Americans and Latinos in Monroe County experience higher rates of hospitalizations due to assault compared to Whites (Figure 35).
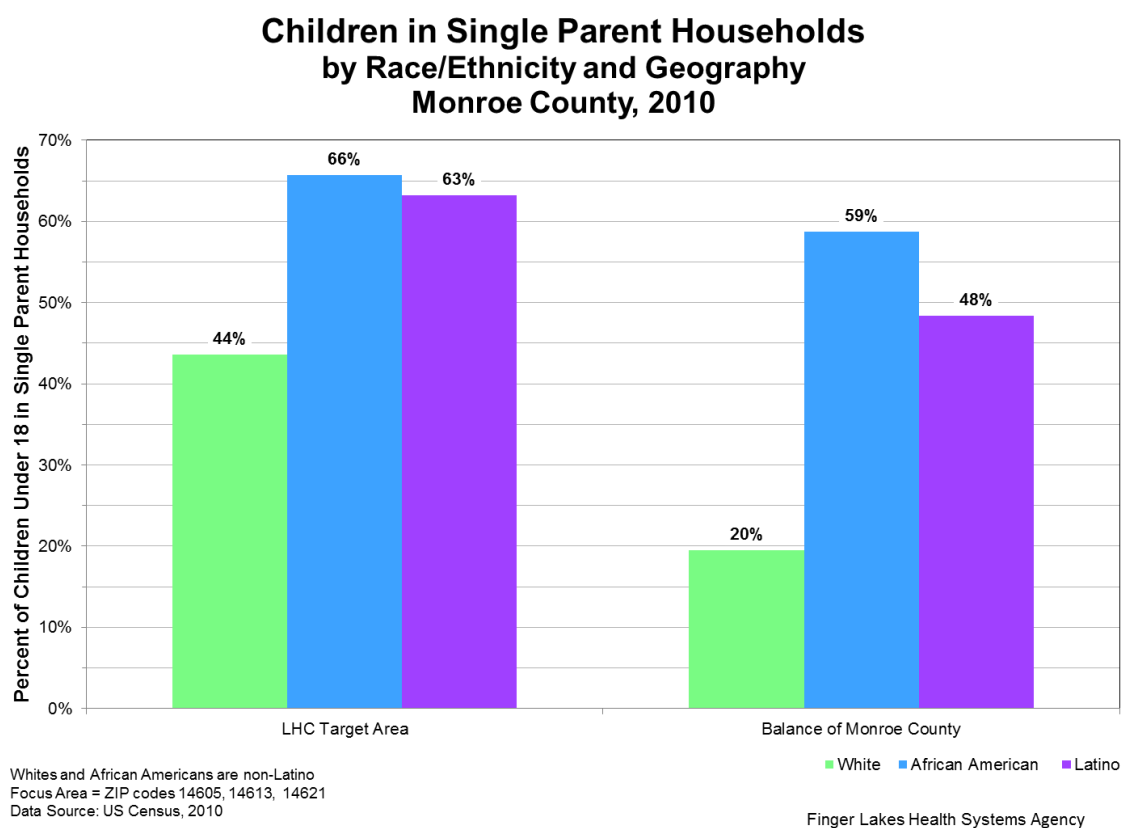
Figure 35

Hospitalization Due to Assault by Race/Ethnicity
Monroe County
5-Year Average (2006-2010)

Rates are age-sex adjusted to the US 2000 population
Whites and African Americans are non-Latino
Source: NYS SPARCS

Finger Lakes Health Systems Agency

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[4]A neighborhood near the intersection of Clifford and Conkey avenues in northeast Rochester (ZIP code 14621)

Family composition is another important component of one's social circumstances. The following chart demonstrates Latino children living outside the Target Area are more likely than White children to live in a single parent household. This disparity becomes even more pronounced within the Target Area as more than 60% of Latino children live in a single parent household (Figure 36).
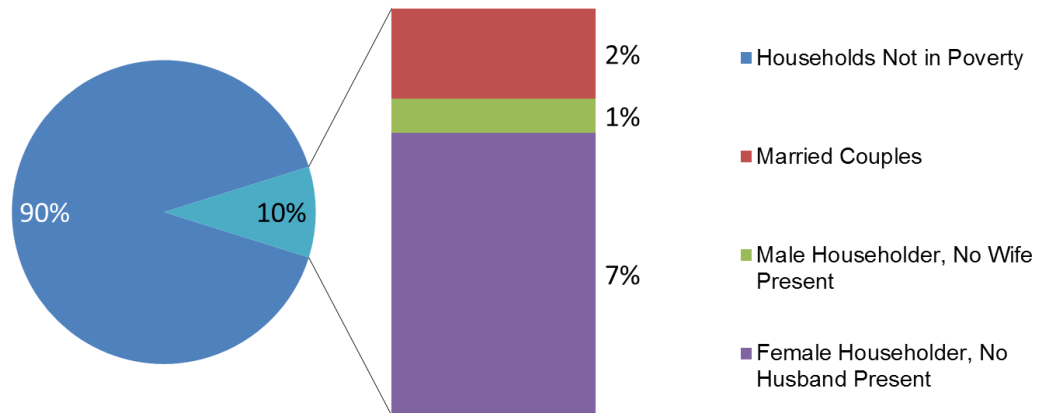
Figure 36

Children in Single Parent Households
by Race/Ethnicity and Geography
Monroe County, 2010

Whites and African Americans are non-Latino
Focus Area = ZIP codes 14605, 14613, 14621
Data Source: US Census, 2010

Finger Lakes Health Systems Agency

While having only one earner has obvious implications for a family's financial resources (see Figure 37), there are additional, less tangible consequences of this domestic structure. Single mothers likely experience higher levels of stress and social isolation as they are forced to assume additional parenting duties, perhaps worsening the effects of lower SES on their health. Furthermore, a general lack of positive male role models in the home has the potential to increase a child's risk for a variety of undesirable outcomes, including poor school achievement, substance abuse, and criminal behavior. (Antecol & Bedard, 2007; Harper & McLanahan, 2004; Sarkadi, Kristiansson, Oberklaid, & Bremberg, 2008) Such conditions may contribute to a multi-generational cycle of poor SES.

Figure 37

Households Living in Poverty by Family Composition
Monroe County, 2010

- Households Not in Poverty
- Married Couples
- Male Householder, No Wife Present
- Female Householder, No Husband Present

Data Source: US Census, 2010

Finger Lakes Health Systems Agency

After looking across multiple dimensions of the social environment, it is clear that Latinos in this community are experiencing social circumstances that are far from ideal or equitable. Given the vast body of literature linking one's social status to health, it is difficult to argue that shortcomings in the health status of Latinos are not, at least in part, a direct result of these social and economic conditions. Consequently, it will be difficult to achieve true health equity in this community without addressing the social circumstances outlined here.
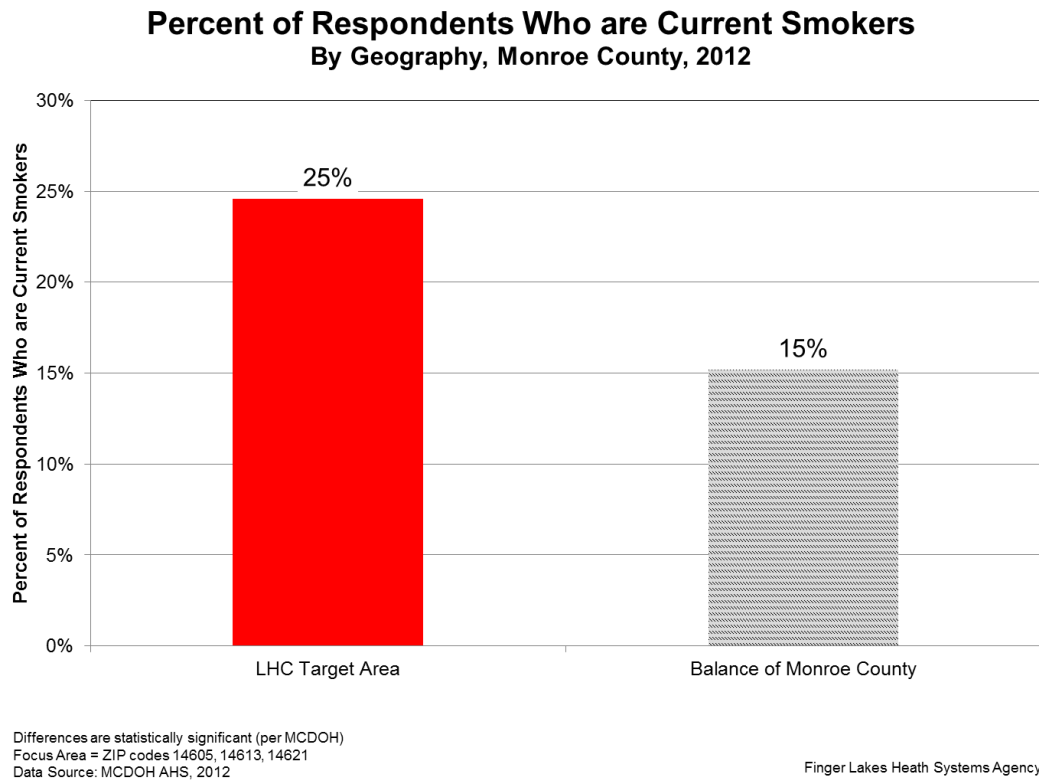
VI.   Health Behaviors

According to the calculations of McGinnis and colleagues, behavior comprises the single largest determinant of health (2002). Given the vast body of literature that illustrates the direct link between unhealthy behaviors (i.e. - smoking, a sedentary lifestyle, diets high sodium and overall calories, heavy drinking, risky sexual behavior, or illicit drug use) and numerous diseases and chronic illnesses, it is easy to see why so much emphasis is placed on this particular factor. The area of health behaviors has been gaining increased attention within the public health community because it is seen as a key avenue through which improvements in population wellbeing can be achieved (Schroeder, 2007). Although changing behavior is by no means easy, it may be more directly actionable and responsive, particularly at a community level, than for example, altering the socioeconomic status of a large portion of the populace. The large estimated effect of lifestyle choices on health outcomes suggests that making strides in this area has the potential to offer the greatest return on investment, an important consideration in an era of increasingly scarce resources.

Given the importance of behavior as a determinant of health and a means by which it can be improved, it is essential to understand what role this factor plays in the observed ethnic disparities in our community. Looking at the results from the 2012 Adult Health Survey (AHS) conducted by the Monroe County Department of Public Health reveals a mix of favorable and unfavorable lifestyle choices among this community's Latinos coupled with an overall concentration of "unhealthy" behavior within the Target Area.

Tobacco use, and smoking in particular, is well established as a deleterious behavior with serious health consequences. This activity has been linked to increased rates of heart disease, stroke, lung and other forms of cancer, COPD, and poor birth outcomes, as well as almost one in every five deaths in America every year ("Health Effects of Cigarette Smoking," 2012).

At a geographic level, the Target Area was found to have significantly higher rates of smoking compared to the balance of Monroe County (Figure 38). As discussed in the Physical Environment Chapter, these ZIP codes are marked by high concentrations of tobacco outlets, suggesting that such easy access to tobacco products facilitates the development and perpetuation of a smoking habit.

Figure 38

Percent of Respondents Who are Current Smokers
By Geography, Monroe County, 2012

Differences are statistically significant (per MCDOH)
Focus Area = ZIP codes 14605, 14613, 14621
Data Source: MCDOH AHS, 2012

Finger Lakes Heath Systems Agency

Although smoking is more prevalent within the Target Area, Latinos in all of Monroe County were not found to have rates of smoking statistically different from Whites (18% of Latino respondents reported being a current smoker). This suggests that smoking may not be a driver of observed health disparities. Indeed, examinations of YPLL due to causes of death that are closely related to smoking indicate better outcomes for Latinos. Specifically, Latinos in and outside of the Target Area experience lower rates of YPLL due to lung cancer (Figure 39) and COPD (Figure 40) compared to both Whites and African Americans.
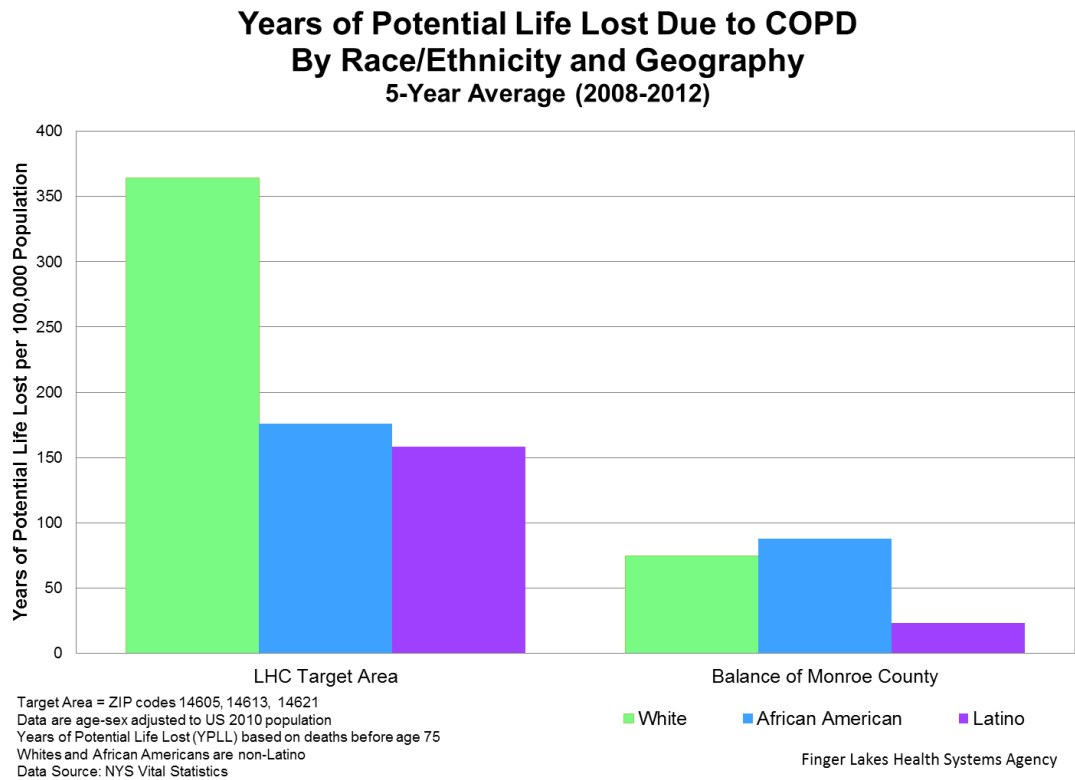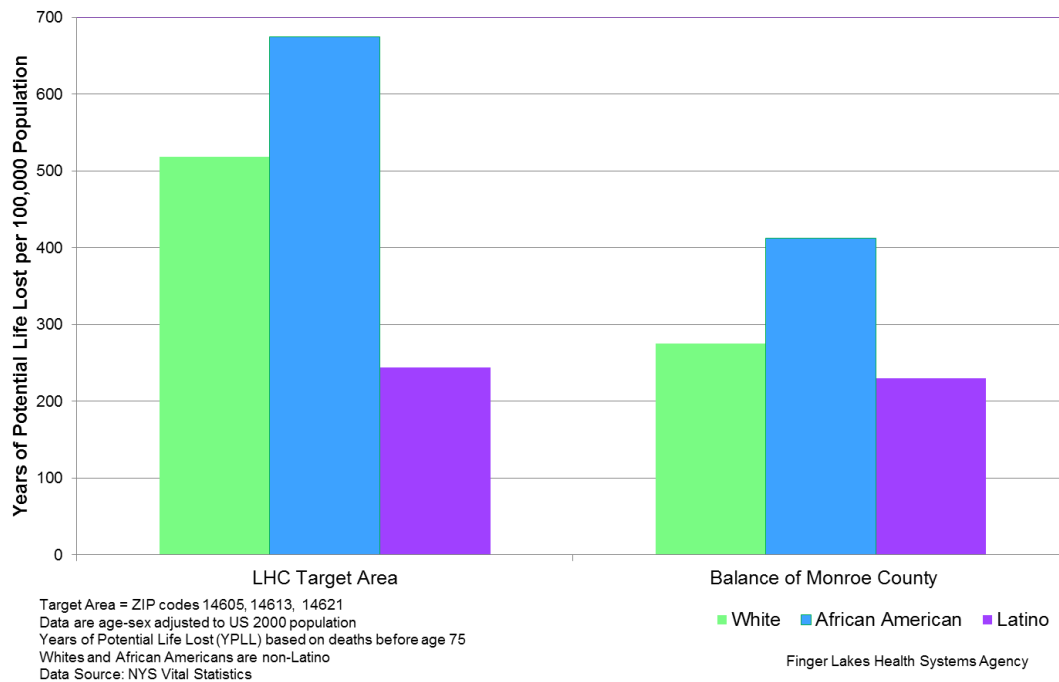
Figure 39

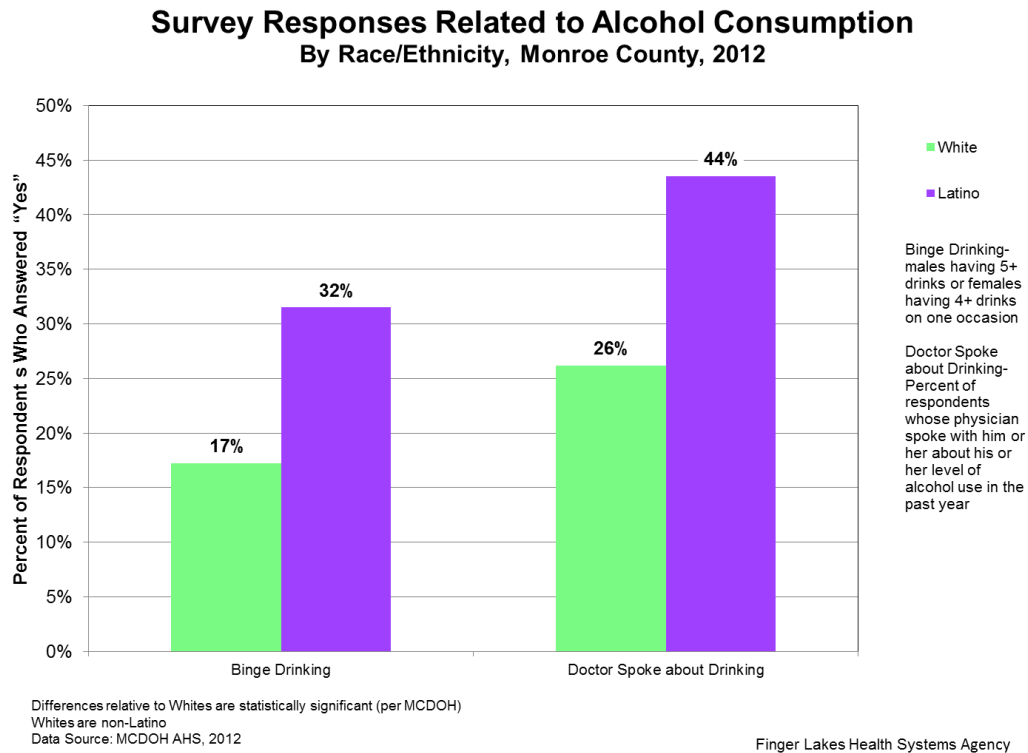## Years of Potential Life Lost Due to COPD
By Race/Ethnicity and Geography
5-Year Average (2008-2012)

Target Area = ZIP codes 14605, 14613, 14621
Data are age-sex adjusted to US 2010 population
Years of Potential Life Lost (YPLL) based on deaths before age 75
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

■ White   ■ African American   ■ Latino

Finger Lakes Health Systems Agency

Figure 40

Years of Potential Life Lost Due to Lung Cancer
By Race/Ethnicity and Geography
5-Year Average (2008-2012)

Target Area = ZIP codes 14605, 14613, 14621
Data are age-sex adjusted to US 2000 population
Years of Potential Life Lost (YPLL) based on deaths before age 75
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

Finger Lakes Health Systems Agency

It should be noted that despite these lower rates of YPLL, almost 20% of Latino adults in Monroe County report being a smoker, a behavior with irrefutable negative health consequences.   As result, there is certainly ample room for improvements in this area even if it is unlikely to be a direct cause of disparity.

A different picture emerges when one examines habits dealing with alcohol consumption. Although moderate alcohol consumption has been linked with better health outcomes, heavy or binge drinking significantly increases one's risk for liver, breast, pancreatic, and colorectal cancer, heart disease, and stroke (Goldberg, Burchfiel, Reed, Wergowske, & Chiu, 1994; Grønbæk, 2009). Results from the AHS suggest that harmful drinking habits may be a unique issue facing the Latino community. Specifically, binge drinking was found to be most prevalent among Latinos, and this group was most likely to report that their doctor had spoken with them about their level of alcohol consumption in the past year (Figure 41).

Figure 41

Survey Responses Related to Alcohol Consumption
By Race/Ethnicity, Monroe County, 2012

Binge Drinking-males having 5+ drinks or females having 4+ drinks on one occasion

Doctor Spoke about Drinking- Percent of respondents whose physician spoke with him or her about his or her level of alcohol use in the past year

Differences relative to Whites are statistically significant (per MCDOH)
Whites are non-Latino
Data Source: MCDOH AHS, 2012

Finger Lakes Health Systems Agency

Consistent with these reports, Latinos in Monroe County experience the highest rate of YPLL due to chronic liver disease of all racial and ethnic groups (Figure 42), while Figure 43 reveals that Latino men in the Finger Lakes region experience the highest rates of new pancreatic and liver cancer cases (Similar differences were not found between White and Latina women. We are unable to examine racial/ethnic differences in drinking behaviors by gender).
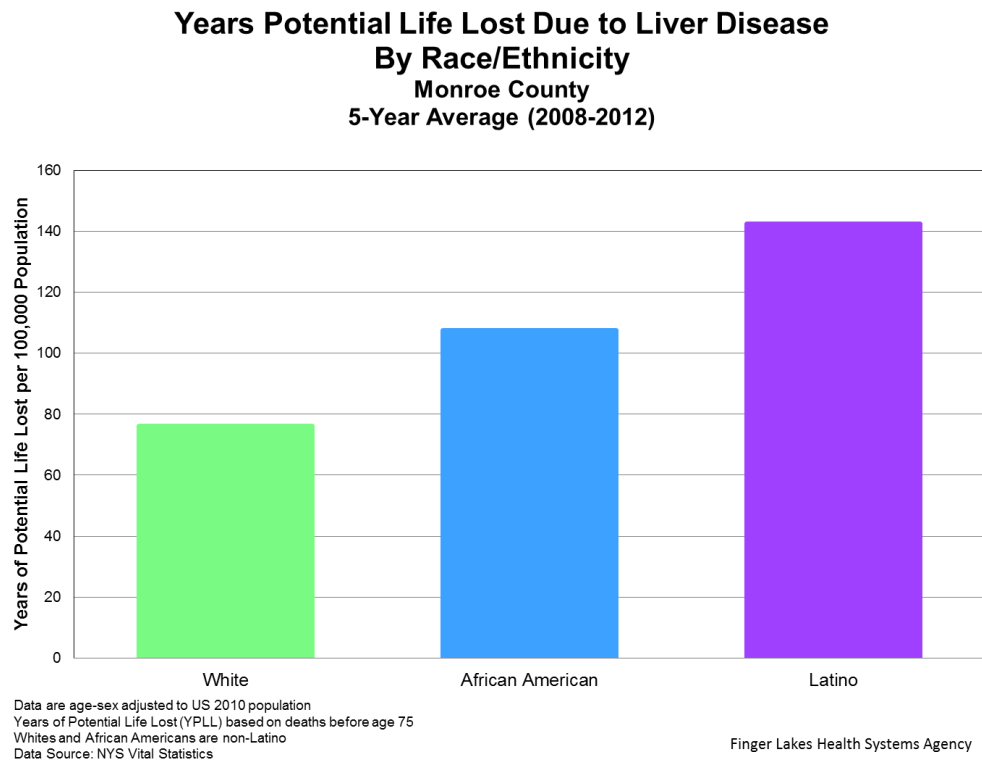
Figure 42

**Years Potential Life Lost Due to Liver Disease
By Race/Ethnicity**
Monroe County
5-Year Average (2008-2012)

Data are age-sex adjusted to US 2010 population
Years of Potential Life Lost (YPLL) based on deaths before age 75
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

Finger Lakes Health Systems Agency

Figure 43

Incidence of Select Cancers Related to Alcohol Consumption for Males
By Race/Ethnicity
Finger Lakes Region, (2004-2008)
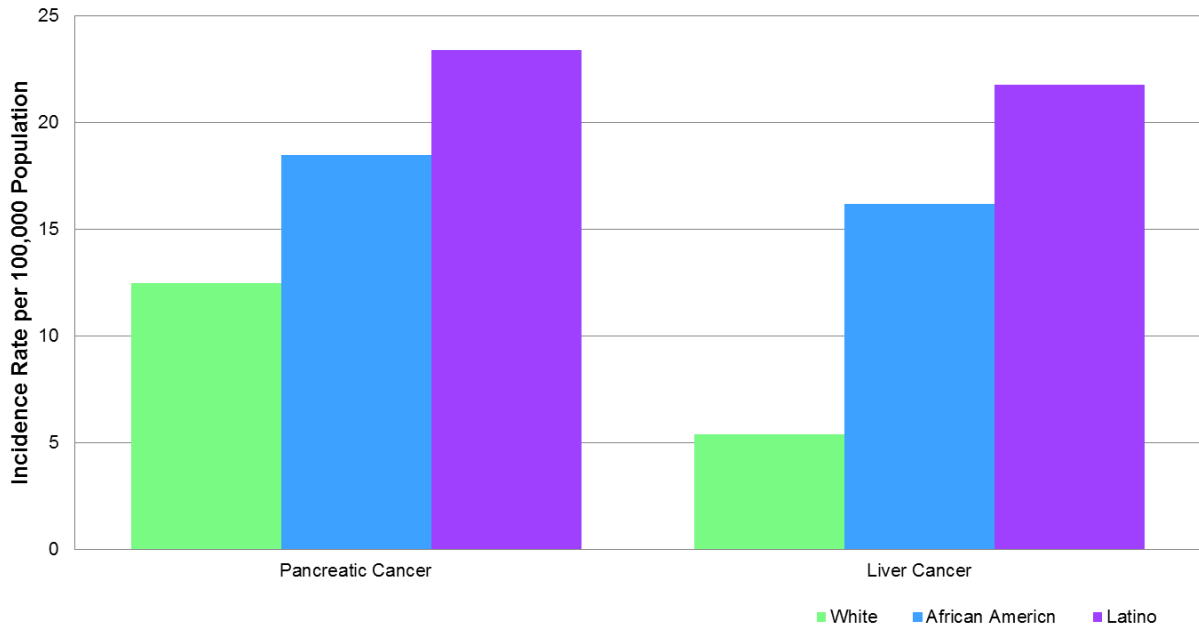
Data are age adjusted to the US 2000 population
Whites and African Americans are non-Latino
Data Source: NYS Cancer Registry

Finger Lakes Health Systems Agency

Diet represents another behavior with strong links to health outcomes. A poor diet significantly increases the risk of obesity and of developing diseases, such as cerebrovascular disease, type-2 diabetes, and certain types of cancer, including colorectal, pancreatic, and stomach ("Diet and Physical Activity: a Public Health Priority," 2013; Key, Allen, Spencer, & Travis, 2002). Conversely, diets that are energy balanced (calorie consumption is equal to calorie expenditure), high in fruits, vegetables and whole grains, and low in fat, salt and refined sugars have numerous protective health benefits. In Monroe County, Latinos appear to have mixed success in meeting dietary recommendations. For example, while 23% of Latinos reported consuming sugary drinks or soda one or more times per day, this rate was not found to be statistically significantly different from the estimated prevalence among Whites. As a result, soda/sugary drink consumption is not likely contributing to ethnic disparities between Whites and Latinos, yet it may be an area to target in terms of improving overall health status.

Fast food consumption, on the other hand, does significantly vary by ethnicity. As seen in Figure 44, 21% of Latinos report eating fast food three or more times a week compared to just 9% Whites. Given the nutritional content of the average fast food meal, it is reasonable to conclude that this represents a greater prevalence of unhealthy dietary habits among Latinos. Further evidence of poor nutritional habits can be seen in the percent of survey respondents who report eating less than one fruit and one vegetable per day during the past month. Latinos were significantly more likely to have these eating behaviors compared to Whites (Figure 44).

Figure 44
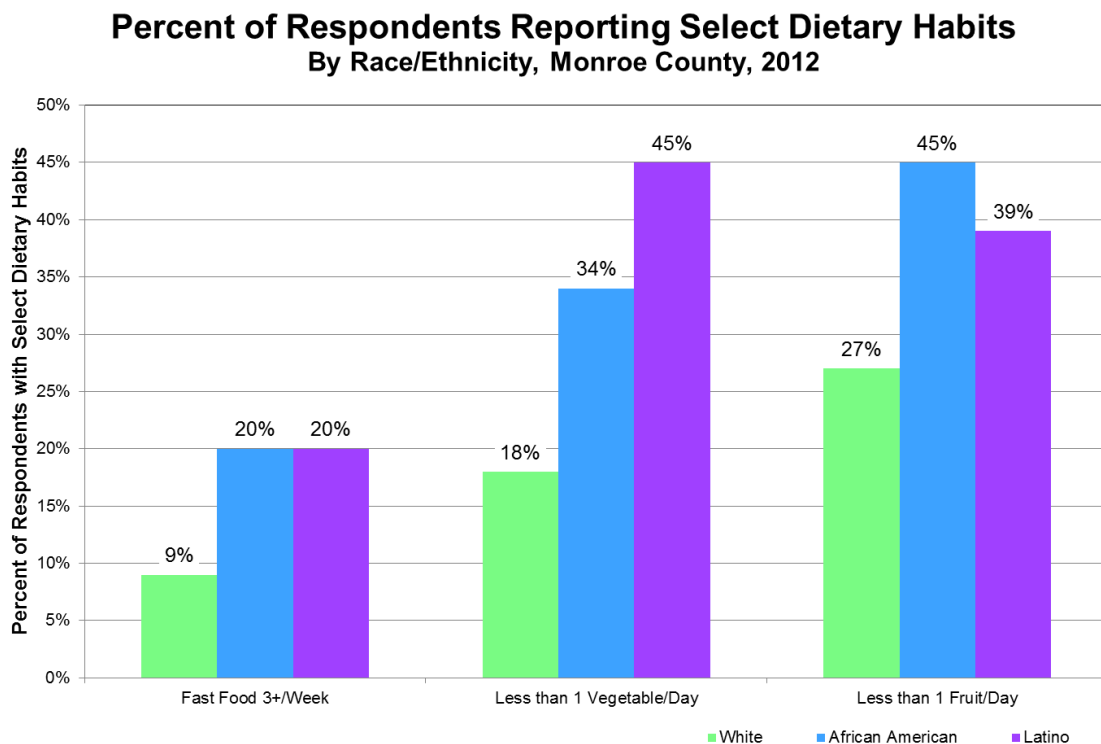
Percent of Respondents Reporting Select Dietary Habits
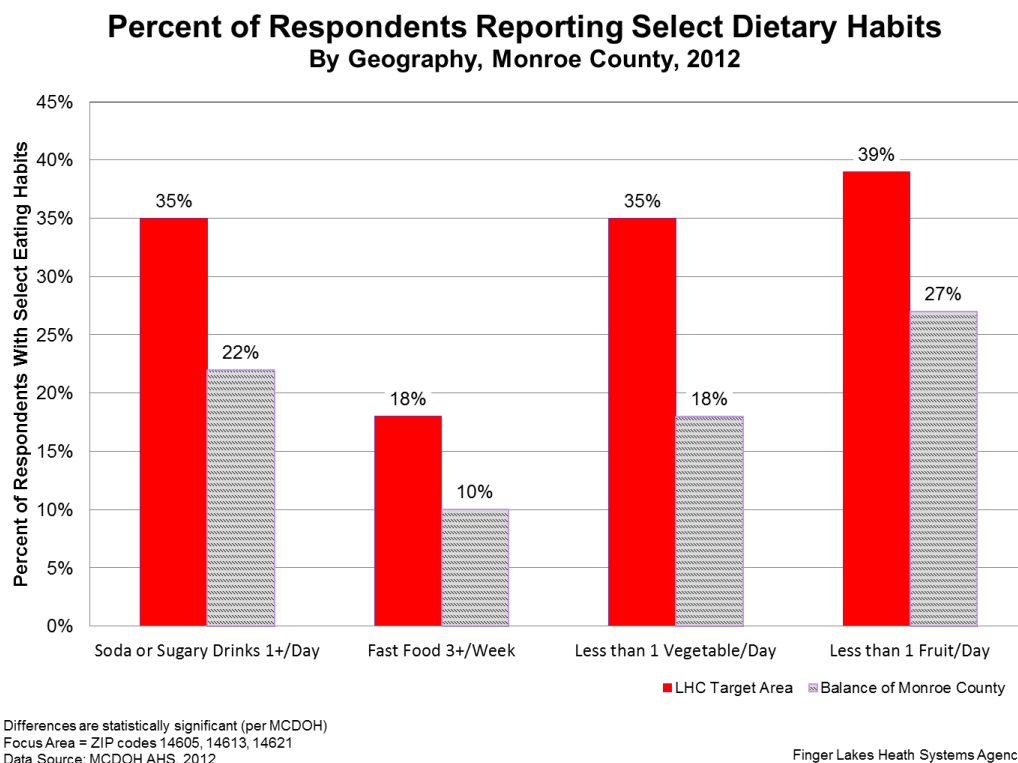**By Race/Ethnicity, Monroe County, 2012**

Differences relative to Whites are statistically significant (per MCDOH)
Whites and African Americans are non-Latino
Data Source: MCDOH AHS, 2012

Finger Lakes Heath Systems Agency

In the Target Area, residents are significantly more likely to regularly consume soda or sugary drinks and fast food, as well as less likely to eat fruits and vegetables, further illustrating the concentration of unhealthy behaviors in this area (Figure 45).
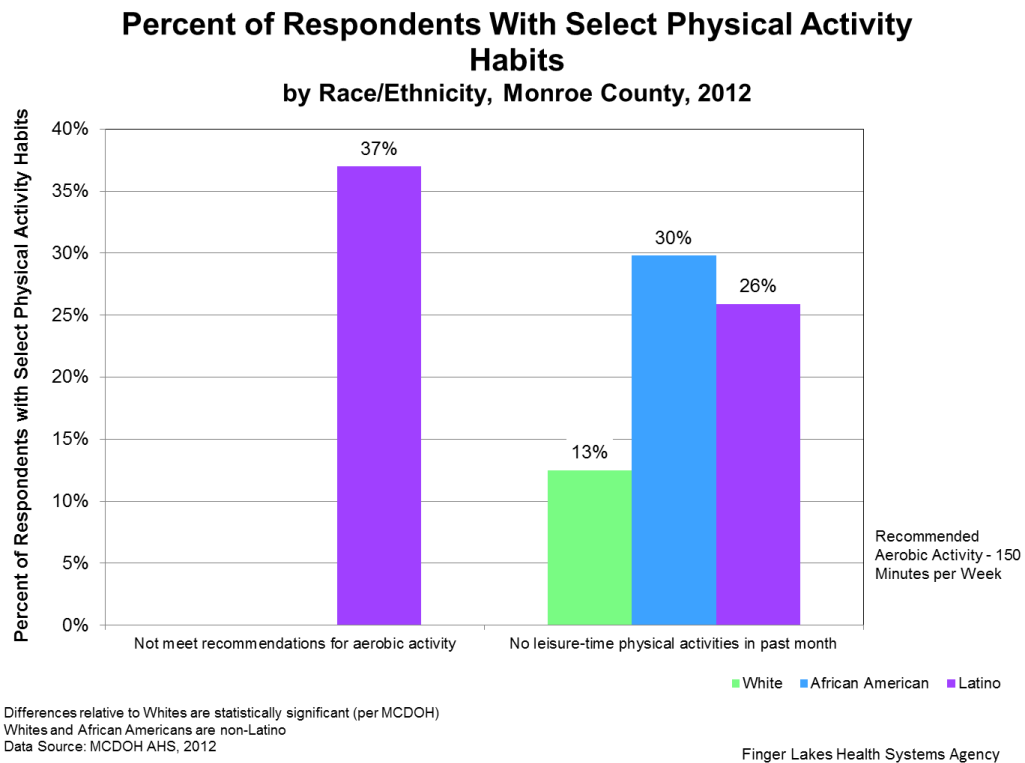
Figure 45

Percent of Respondents Reporting Select Dietary Habits
By Geography, Monroe County, 2012

Differences are statistically significant (per MCDOH)
Focus Area = ZIP codes 14605, 14613, 14621
Data Source: MCDOH AHS, 2012

Finger Lakes Heath Systems Agency

Physical activity has also been shown to reduce the risk of many chronic conditions, including heart disease, diabetes, cancer, and stroke (Warburton, Nicol, & Bredin, 2006). Additionally, exercise is frequently examined alongside diet, as these two factors concurrently affect weight and risk for the myriad health issues associated with obesity such as heart disease, type 2 diabetes, kidney disease, breast and colon cancer, stroke, liver disease, and osteoarthritis ("Diet and Physical Activity: a Public Health Priority," 2013; "The Health Effects of Overweight and Obesity," 2011).
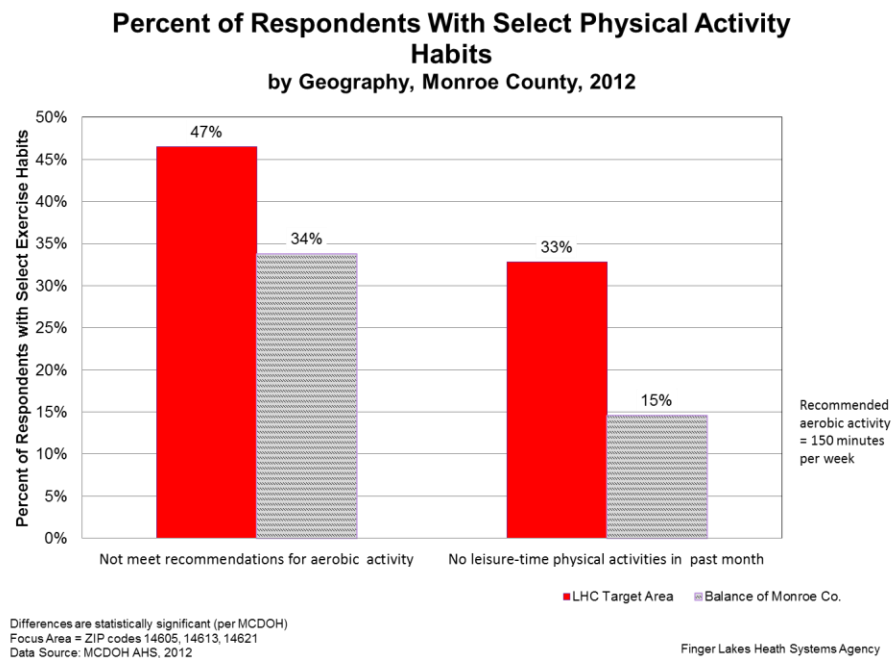
According to the Centers for Disease Control (CDC), adults should engage in moderate-intensity exercise for 30 minutes or more at least five days per week and/or vigorous intensity activity for 20 minutes or more at least three days per week ("How Much Physical Activity Do Adults Need?," 2011). In Monroe County, 37% of Latinos reported not meeting these guidelines (not significantly different from Whites), while Latinos were significantly more likely to report no leisure time activity in the past four weeks. (Figure 46).

Figure 46

Percent of Respondents With Select Physical Activity Habits
by Race/Ethnicity, Monroe County, 2012

Recommended Aerobic Activity - 150 Minutes per Week

■ White ■ African American ■ Latino

Differences relative to Whites are statistically significant (per MCDOH)
Whites and African Americans are non-Latino
Data Source: MCDOH AHS, 2012
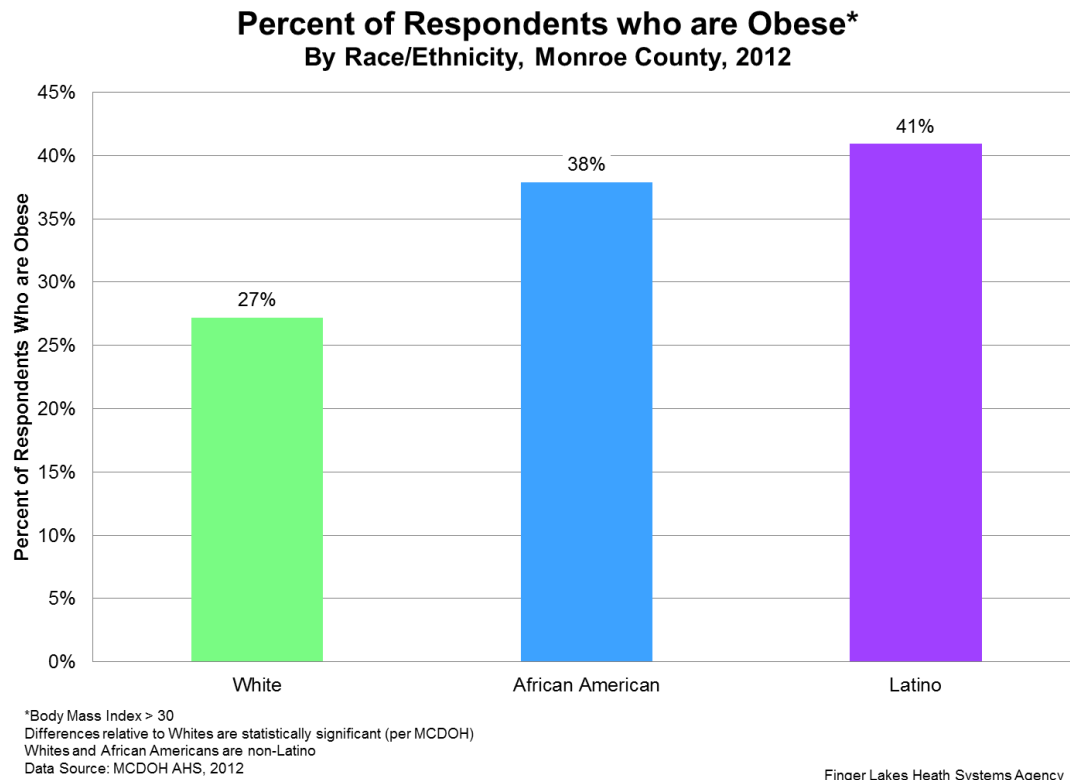
Finger Lakes Health Systems Agency

Target Area residents, meanwhile, were both more likely to not meet the physical activity guidelines and to not participate in any leisure time physical activity (Figure 47).

Figure 47

Percent of Respondents With Select Physical Activity Habits
by Geography, Monroe County, 2012

Recommended aerobic activity = 150 minutes per week

■ LHC Target Area ■ Balance of Monroe Co.

Differences are statistically significant (per MCDOH)
Focus Area = ZIP codes 14605, 14613, 14621
Data Source: MCDOH AHS, 2012
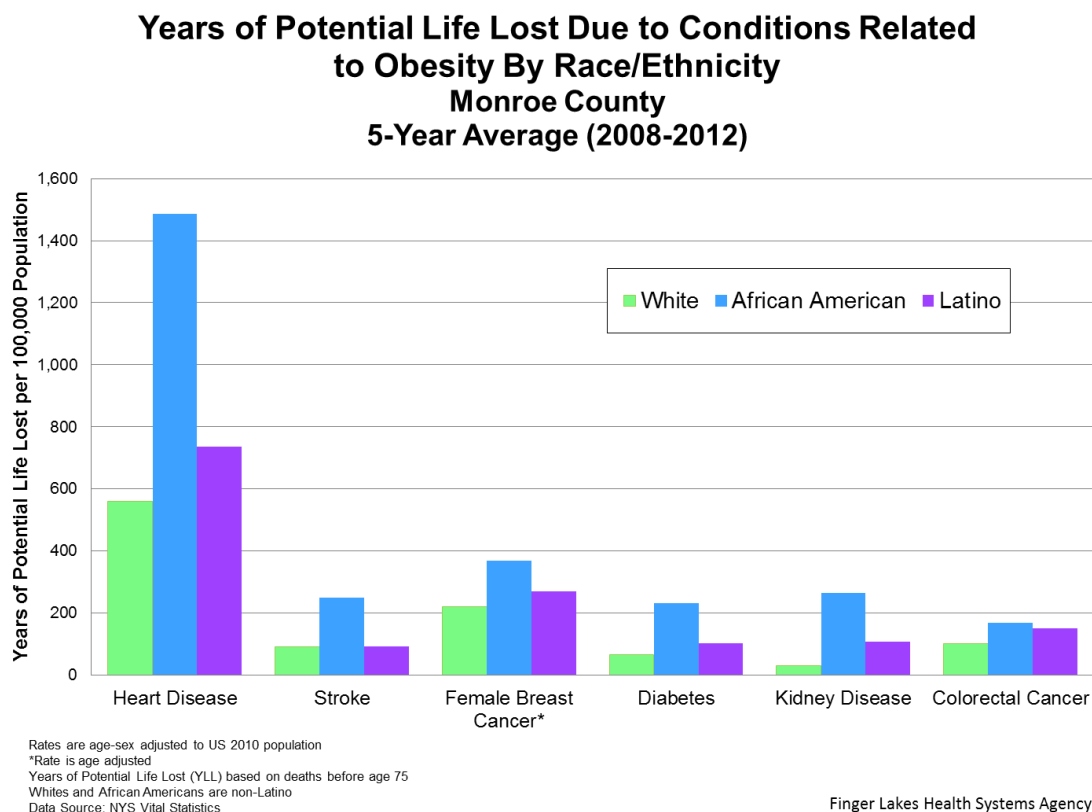
Finger Lakes Heath Systems Agency

While this data shows a mix of favorable and unfavorable exercise and dietary habits among Latinos, there is clear evidence that obesity is a major issue for the local Hispanic population. As Figure 48 illustrates, obesity is much more common for adults of color in Monroe County.

Figure 48

Percent of Respondents who are Obese*
By Race/Ethnicity, Monroe County, 2012

*Body Mass Index > 30
Differences relative to Whites are statistically significant (per MCDOH)
Whites and African Americans are non-Latino
Data Source: MCDOH AHS, 2012

Finger Lakes Heath Systems Agency

Two out of five Latino adults have a BMI over 30, placing them at significant risk for a variety of chronic conditions. Within the same survey, Latinos did not report higher rates of elevated blood pressure or diabetes, two conditions closely associated with obesity, as compared to Whites. Terminal outcomes related to obesity yield varied results: for some conditions, like heart disease, stroke, and breast cancer, Latinos experience comparable or lower rates of YPLL, while for others (i.e. - diabetes, kidney disease, and colorectal cancer), they fare worse (Figure 49).
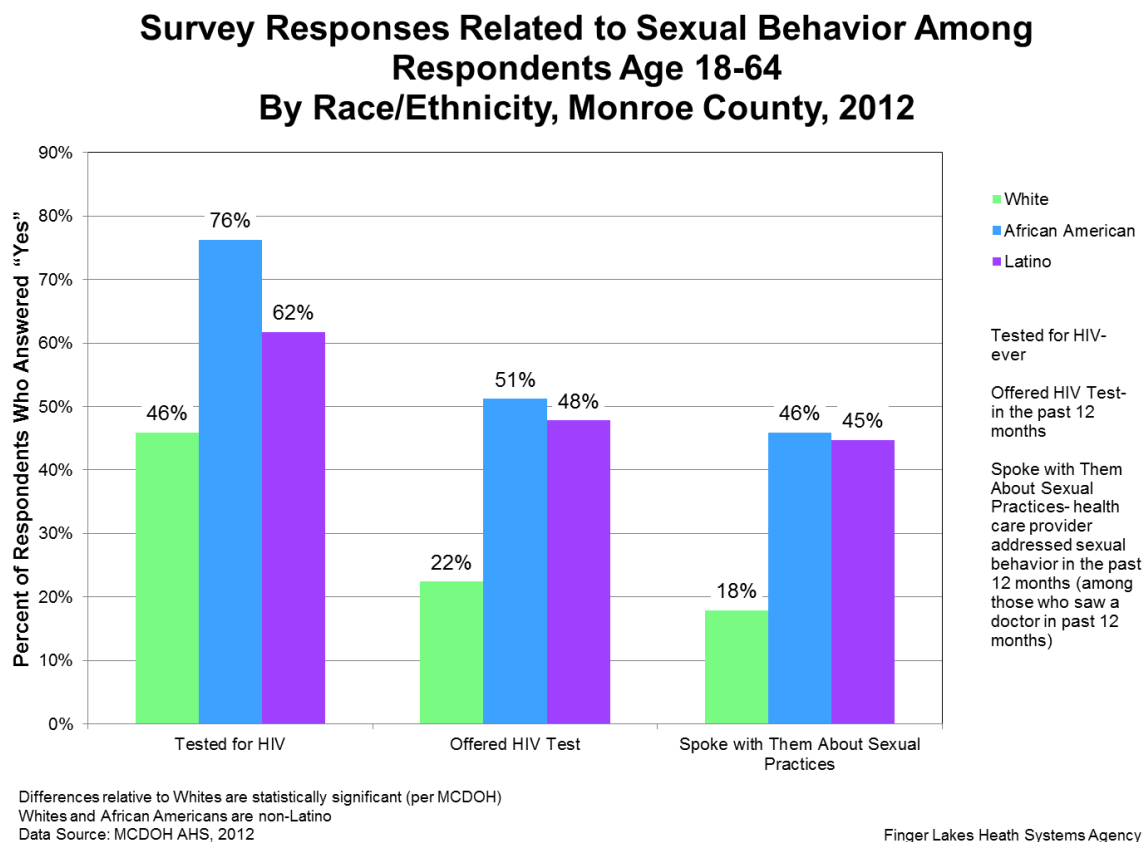
Figure 49

Years of Potential Life Lost Due to Conditions Related to Obesity By Race/Ethnicity
Monroe County
5-Year Average (2008-2012)

Rates are age-sex adjusted to US 2010 population
*Rate is age adjusted
Years of Potential Life Lost (YLL) based on deaths before age 75
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

Finger Lakes Health Systems Agency

These mixed outcomes give some suggestion that the issue of obesity and its related health effects is an emerging one in the local Latino population. Indeed, the 2000 Monroe County AHS reported that only 17% of Latinos were obese. If the high rate of obesity in this group is a relatively new development, one would not necessarily expect to see corresponding adverse results in long-term measures like YPLL as the full downstream health effects of obesity could take years to develop. While these numbers may forecast worsening health disparities, it also offers some hope that interventions can intercede before population health deteriorates.

Sexual behavior also affects health. Risky sexual practices significantly increase the likelihood of contracting a number of communicable diseases ("Risk Factors," 2013), which result in an estimated $16 billion in U.S. health care costs in addition to the human cost of living with an infectious condition ("Incidence, Prevalence, and Cost of Sexually Transmitted Infections in the United States," 2013). At a national level, the Healthy People 2020 initiative has identified reducing racial and ethnic disparities in the occurrence of sexually transmitted diseases (STDs) as a key component to achieving the objective of reducing the burden of (STDs) ("Sexually Transmitted Diseases," 2012). According to the AHS, over 14% of Latinos between the age of 18 and 64 in Monroe County report engaging in one or more risky sexual behaviors (consisting of having more than one sexual partner, using intravenous drugs, having been treated for an STD or venereal disease, having given or received money or drugs in exchange for sex, or having sex without a condom over the past year). This value was not found to be significantly different
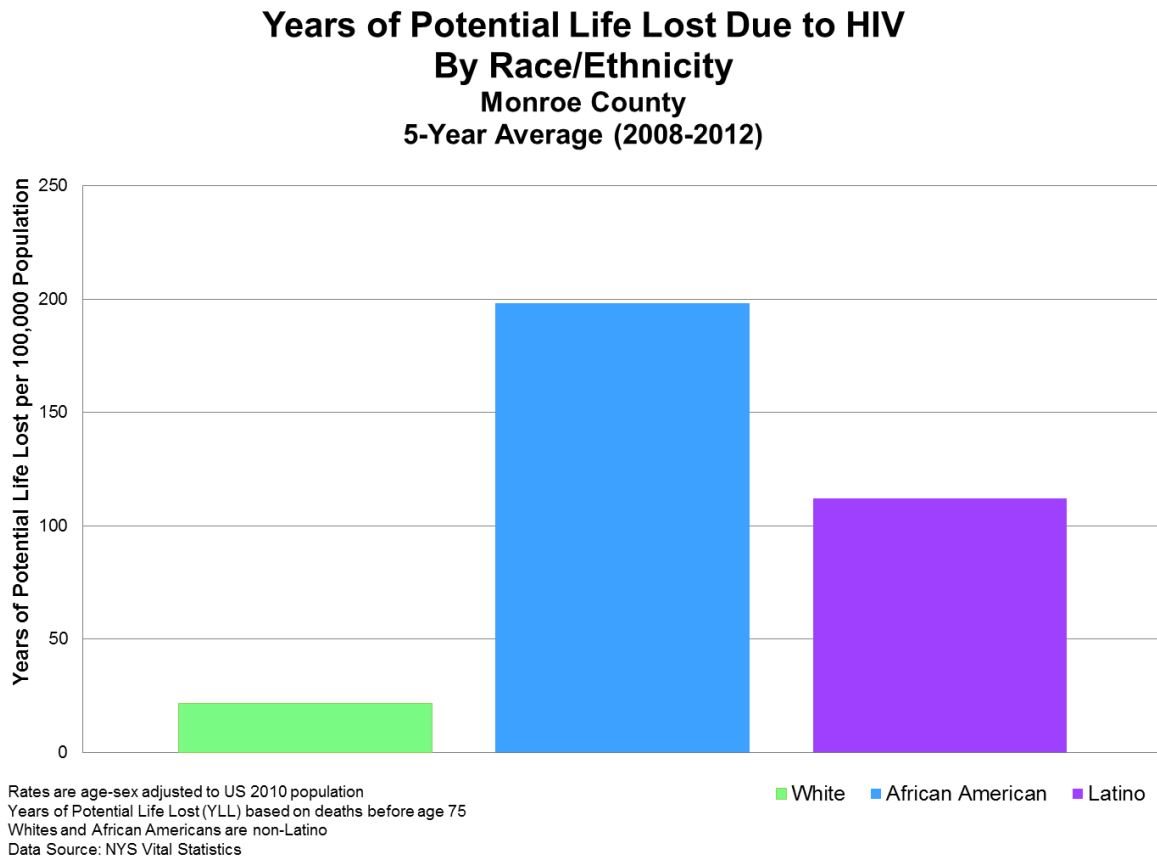
from Whites. However, health care providers appear to have been more likely to speak with Latinos about sexual behaviors and offer or administer an HIV test to this group compared to Whites (Figure 50). This may suggest that health providers view Latinos as having a greater risk of having a sexually transmitted disease. However, recent changes in New York State Law that require virtually all persons between the ages of 13 and 64 receiving hospital or primary care services to be offered an HIV test suggest that providers should be addressing this subject with all of their patients. As such, this may be an area in need of improvement among White individuals.

Figure 50

Survey Responses Related to Sexual Behavior Among Respondents Age 18-64 By Race/Ethnicity, Monroe County, 2012

Percent of Respondents Who Answered "Yes"

Legend:
- White
- African American
- Latino

Tested for HIV- ever

Offered HIV Test- in the past 12 months

Spoke with Them About Sexual Practices- health care provider addressed sexual behavior in the past 12 months (among those who saw a doctor in past 12 months)

Tested for HIV: White 46%, African American 76%, Latino 62%
Offered HIV Test: White 22%, African American 51%, Latino 48%
Spoke with Them About Sexual Practices: White 18%, African American 46%, Latino 45%

Differences relative to Whites are statistically significant (per MCDOH)
Whites and African Americans are non-Latino
Data Source: MCDOH AHS, 2012

Finger Lakes Heath Systems Agency

In terms of outcomes, Figure 51 illustrates that premature death due to HIV is an important source of racial and ethnic disparities.

Figure 51

Years of Potential Life Lost Due to HIV
By Race/Ethnicity
Monroe County
5-Year Average (2008-2012)

Rates are age-sex adjusted to US 2010 population
Years of Potential Life Lost (YLL) based on deaths before age 75
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

It is not clear if this higher rate of premature mortality among Latinos (compared to Whites) is due to a greater prevalence of disease or some other factors such as inferior medical care. Yet, when viewed in conjunction with existing national evidence that racial and ethnic minorities are more likely to engage in risky sexual behaviors (Caetano & Hines, 1995; Pflieger, Cook, Niccolai, & Connell, 2013), it appears that differences in individual behaviors across ethnic groups may be contributing to this disparate terminal outcome.

Finally, there are additional risky behaviors that warrant investigation due to their connection with adverse health outcomes. Habits such as unsafe driving practices or the use of illicit drugs come with the potential for negative health outcomes. For example, impaired and unsafe driving coupled with a failure to properly use safety restraints help to make motor vehicle accidents one of leading causes of death in the United States ("Ten Significant Public Health Achievements- United States, 2001-2010: Motor Vehicle Safety," 2011), while the use of illegal drugs can result in numerous adverse events, including fatal overdose (Chen & Lin, 2009).

In the Health Outcomes chapter, accidents were identified as a leading cause of YPLL for all racial and ethnic groups. This category captures a variety of unintentional causes of death, but as Figures 52 and 53 illustrate, deaths from motor vehicle accidents (MVAs) and drug and alcohol poisoning constitute the majority of YPLL due to accidents for all racial and ethnic groups in Monroe County.
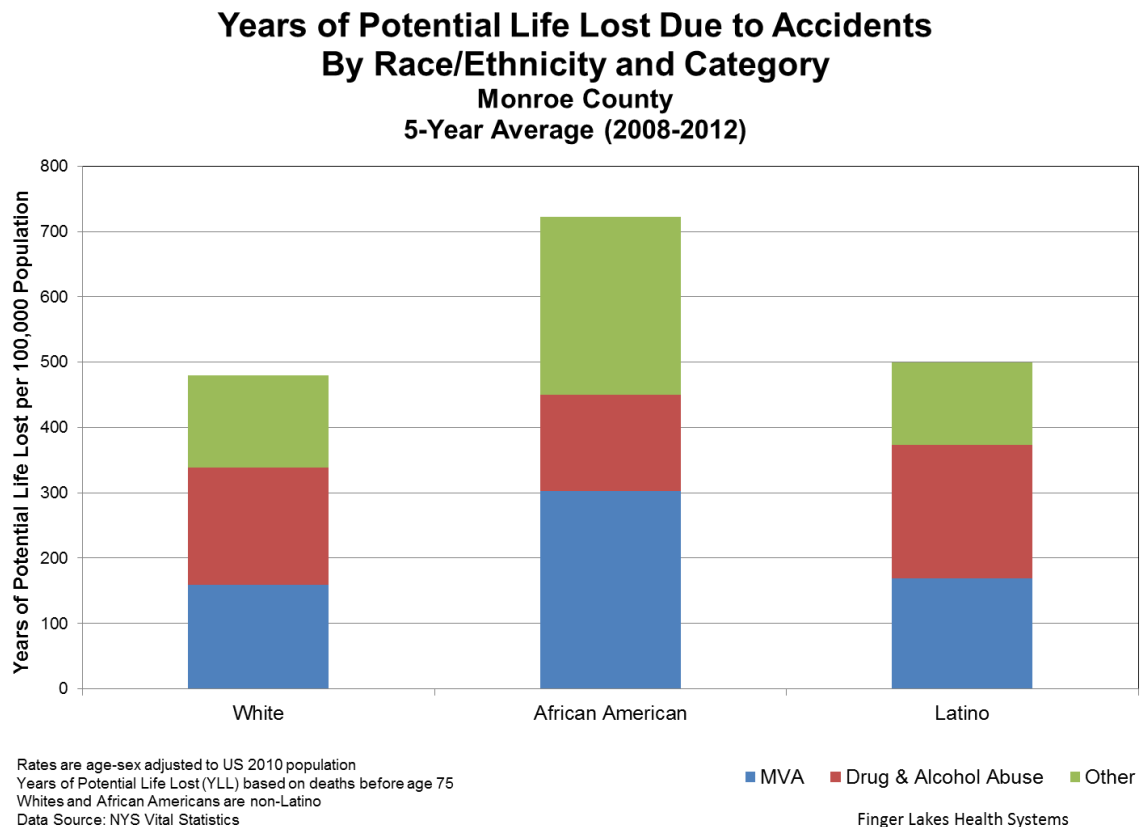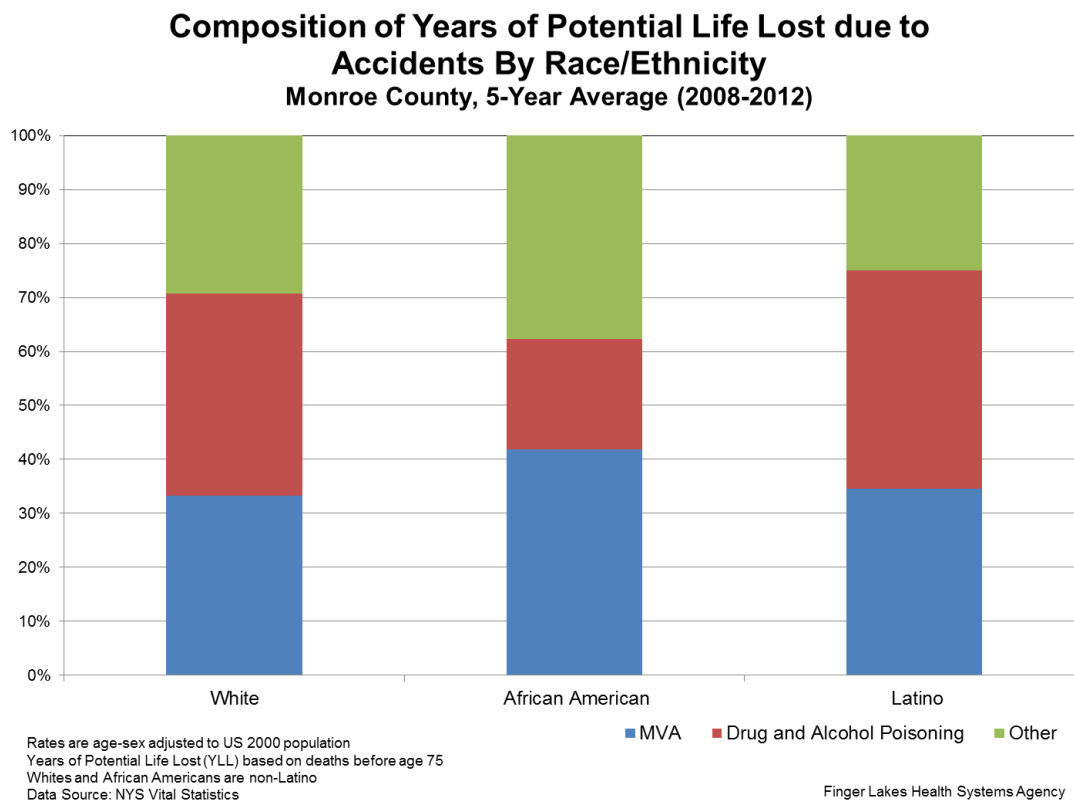
Figure 52

Years of Potential Life Lost Due to Accidents
By Race/Ethnicity and Category
Monroe County
5-Year Average (2008-2012)

Rates are age-sex adjusted to US 2010 population
Years of Potential Life Lost (YLL) based on deaths before age 75
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

■ MVA ■ Drug & Alcohol Abuse ■ Other

Finger Lakes Health Systems

Figure 53

Composition of Years of Potential Life Lost due to Accidents By Race/Ethnicity
Monroe County, 5-Year Average (2008-2012)

Rates are age-sex adjusted to US 2000 population
Years of Potential Life Lost (YPLL) based on deaths before age 75
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

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These graphs also illustrate that Latinos experience the largest proportion of YPLL from drug and alcohol poisoning. Local data on drug use behaviors across racial and ethnic groups are not readily available; however this observed disparity suggests that illicit drug use (coupled with the higher rates of binge drinking established earlier) may be particularly prevalent in Latinos.

In light of the observed ethnic disparities in mental health issues and binge drinking, and the higher rates of YPLL due to drug and alcohol poisoning, one must give consideration to the issue of self-medication (Khantzian, 1997), whereby an individual attempts to control issues related to mood and mental health through the use of a variety of chemicals ranging from nicotine or alcohol to controlled substances. We are unable to elucidate underlying causes of the observations noted above; however, we believe that further investigation of this potential causal pathway is warranted.

In total, it is clear that there are distinct differences in health behaviors between Latinos and Whites in Monroe County and residents of the Target Area and non-Target Area residents. Given the strong connections between the behaviors discussed above and negative health outcomes, it is clear that this determinant must be a key area of focus for any health improvement action plan.

A more startling conclusion from this chapter, however, may be the concordance between the behaviors documented here and the physical and social environments discussed earlier. For example, higher rates of smoking and unhealthy eating habits, along with lower rates of physical activity, were found among residents of an area marked with numerous tobacco outlets, a retail environment with limited healthy food options, and high rates of crime and violence.[5] Attempting to establish causality is beyond the scope of report, but these results suggest a complex and challenging relationship between where one lives and his or her health.

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[5] It should be noted that this pattern was not found in relation to alcohol consumption as Target Area residents were found to be less likely to have had a drink in the past 30 days.

VII.   Medical Care

Lack of medical care is thought to have less influence on community health than other determinants such as living environment or health behaviors. Nonetheless, there are substantial disparities in access to medical care services for minority populations and those living in the Target Area, compared to Whites and those living in the balance of Monroe County, respectively.

Service Availability

Much of the city of Rochester is a federally-designated Primary Care Health Professional Shortage Area (Figure 54) or a Medically Underserved Area (Figure 55), suggesting that the supply of health professionals, and specifically primary care physicians, is not adequate to meet the needs of these geographies. This may mean that city and Target Area residents must either travel to find a physician, (a potentially challenging task if one does not have a car), seek care in an emergency department setting, seek care in a community clinic setting, or simply forgo receiving care. Given existing evidence showing that primary care is associated with the prevention of illness and death, as well as a more equitable distribution of health within a population (Starfield, Shi, & Macinko, 2005), it is plausible that this supply side deficit may be having harmful effects on the health of city and Target Area residents.

Figure 54

Figure 55

Medically Underserved Areas
By Census Tract in Rochester, NY

Medically Under Served
Areas By Census Tracts

all others
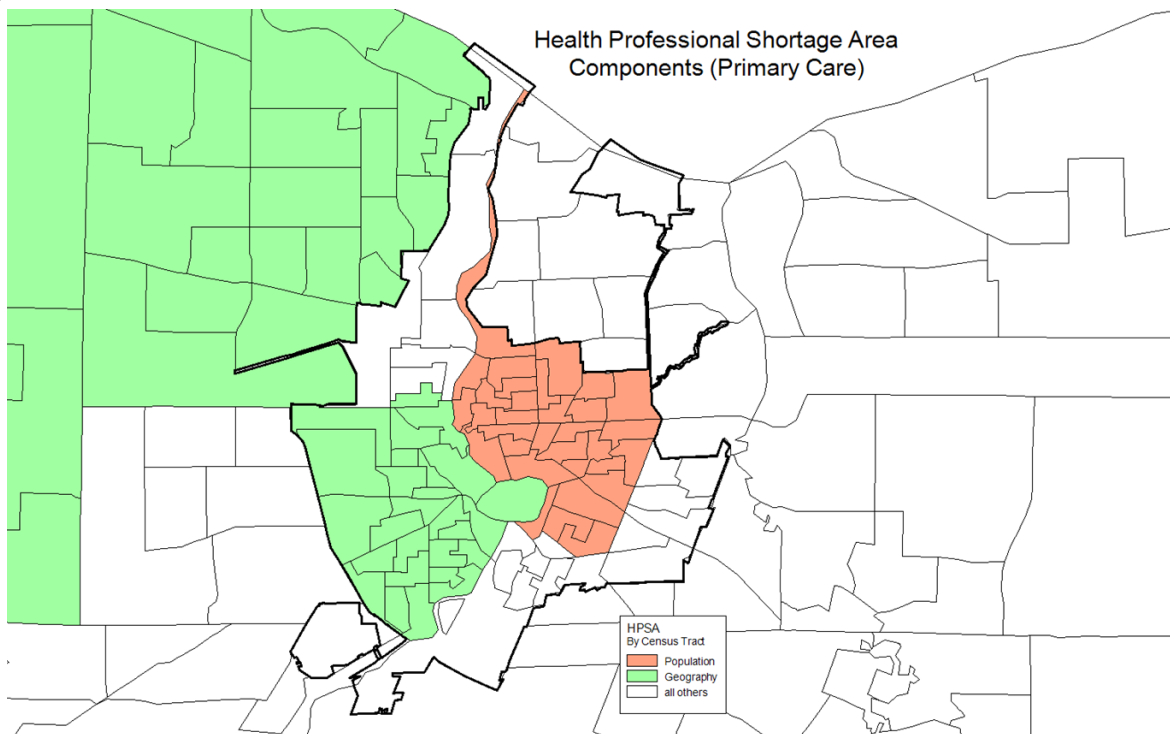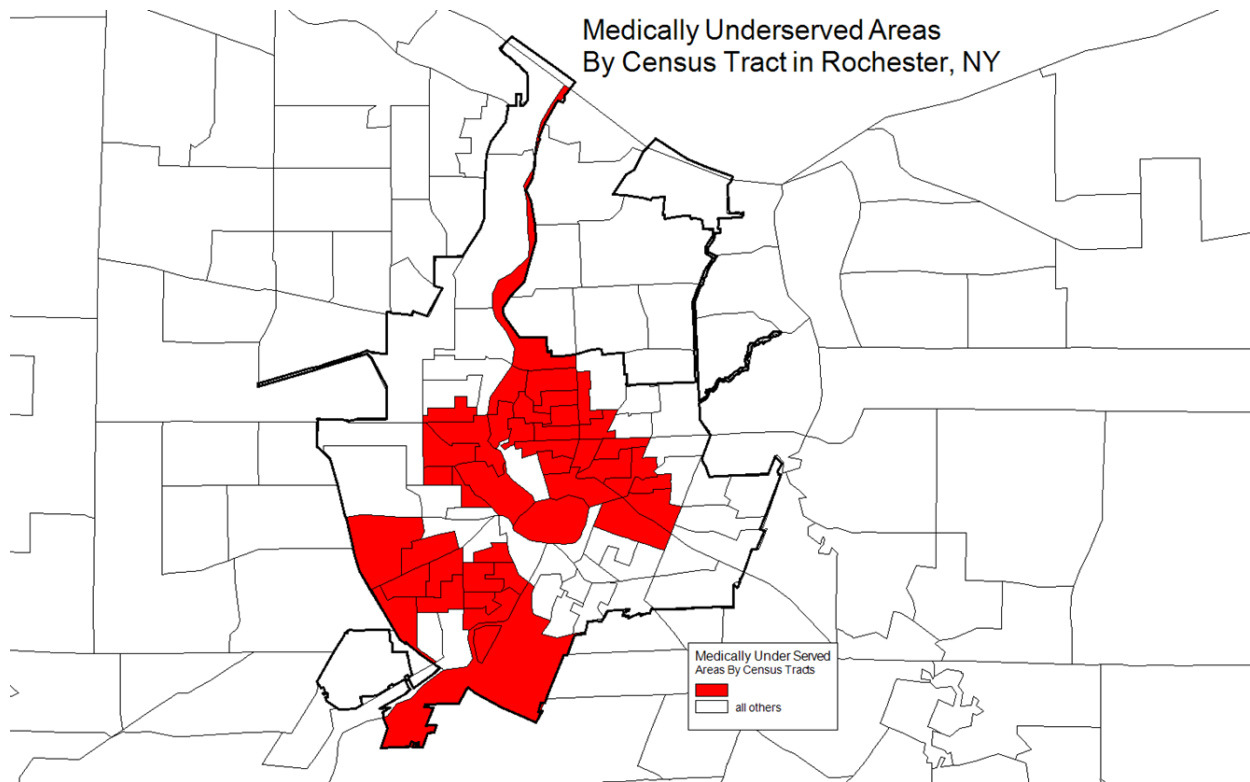
Table 2, based on 2008-2009 physician licensure data, show that there are relatively few physicians practicing in the Target Area. Monroe County has approximately 2,400 full time equivalents (FTE) total physicians and 765 FTE primary care physicians (Center for Health Workforce Studies, 2010). The Target Area, with about 10% of the county's population, has about 15% of all physicians and 11% of primary care physicians, however these numbers are likely inflated by the presence of Rochester General Hospital (RGH) in ZIP code 14621. If one removes the physicians immediately around RGH, the balance of the Target Area drops to less than 1% of physician supply. Similarly, excluding the primary care physicians likely practicing at RGH reveals that the Target Area has only one FTE primary care physician for each 3,190 population, very close to the federal benchmark for primary care physician shortage (one physician per 3,500 population). This suggests that absent a tertiary hospital, the Target Area likely has fewer physicians than needed to meet the needs of the population.

Table 2

Monroe County Physician Supply, 2009					
	Total FTE	Primary Care FTE	Specialist FTE	Population per Primary Care FTE	Population per Specialist FTE
Target Area (Area less 14621)	312 (13)	69 (9)	244 (4)	896 (3190)	252 (6797)
Other Monroe	1,750	580	1170	1180	580
Source: Center for Health Workforce Studies from physician licensure surveys 2008-2009					

Shortages may also exist in the number of mental health providers available to inner-city and Target Area residents. Certain populations living in a designated regions of the city of Rochester (which includes much of the Target Area) have been designated Mental Health HPSAs (see Figure 56), indicating a shortage of mental health professionals for these groups. Shortages in this area may be particularly pertinent to the Latino population in light of the high prevalence of mental health issues among this group outlined the Health Outcomes chapter.

Figure 56
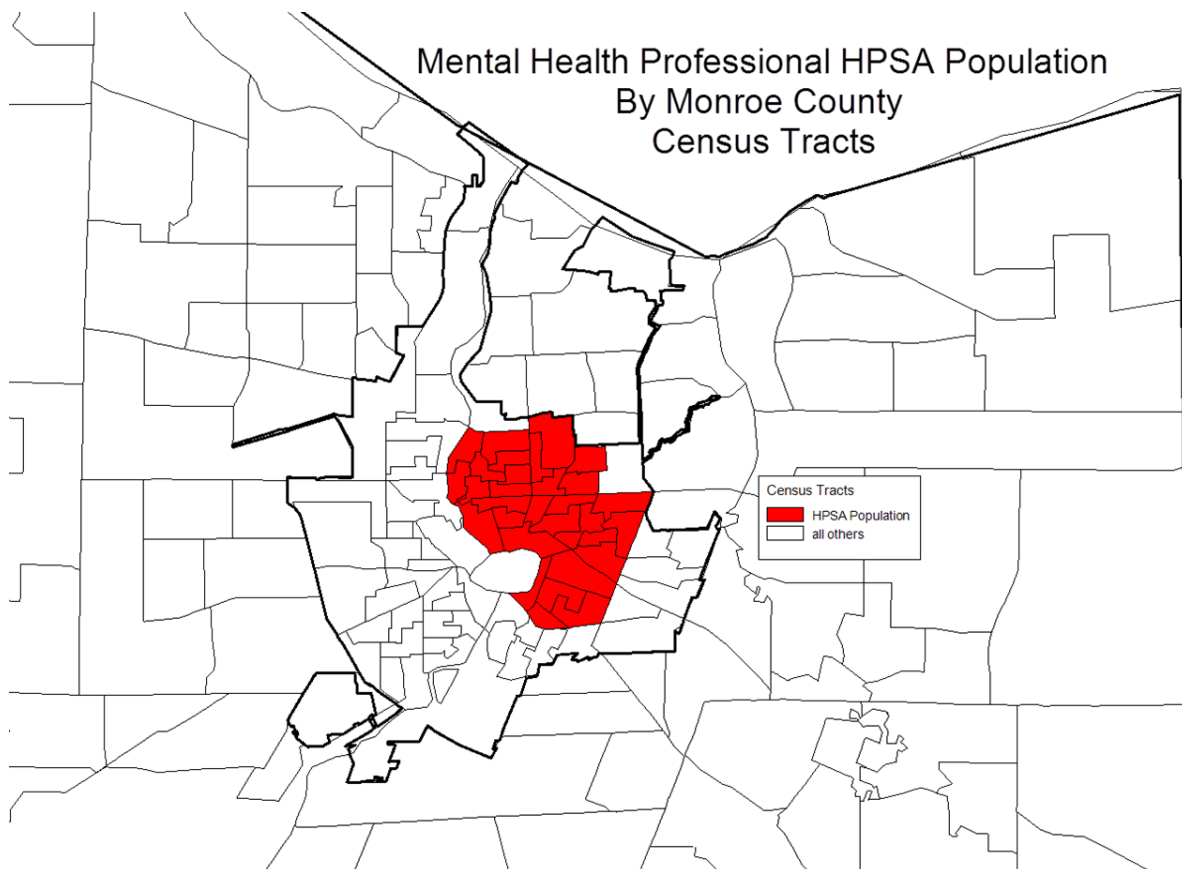
Availability of Health Insurance

Another key factor in determining one's access to medical care is health insurance. Many residents of the Target Area do not have health insurance or have had recent periods when they have not had insurance. According to the AHS, the Target Area has over twice the rate of uninsurance compared to the rest of the county. At the county level, Latinos were significantly less likely to currently have coverage and to have had continuous coverage over the past two years (Table 3).

Table 3

Measures of Health Insurance Availability, Monroe County, 2012						
				Monroe County		
	Target Area	Balance of County		AA NH	WH NH	Latino
Do not have health insurance, age 18-64	18.5*	6.5		14.7**	5.8	14.9**
Did not have health insurance at some point in past 2 years, age 18-24	35.3*	14.6		34.3**	12.7	27.0**
* = significantly different than Balance of County						
** = significantly different than White						
Source: Monroe County Department of Public Health, Adult Health Survey 2012						

County-wide, 27% of Latino working age adults were without health insurance at some time within the past two years. Evidence has clearly shown having health insurance increases one's propensity to use health care services (Manning, Newhouse, Duan, Keeler, & Leibowitz, 1987). The effect of such coverage on actual health outcomes is more controversial, however, from an equity standpoint, it is an injustice that the sickest racial and ethnic groups are also the most likely to face barriers to potentially needed medical care.
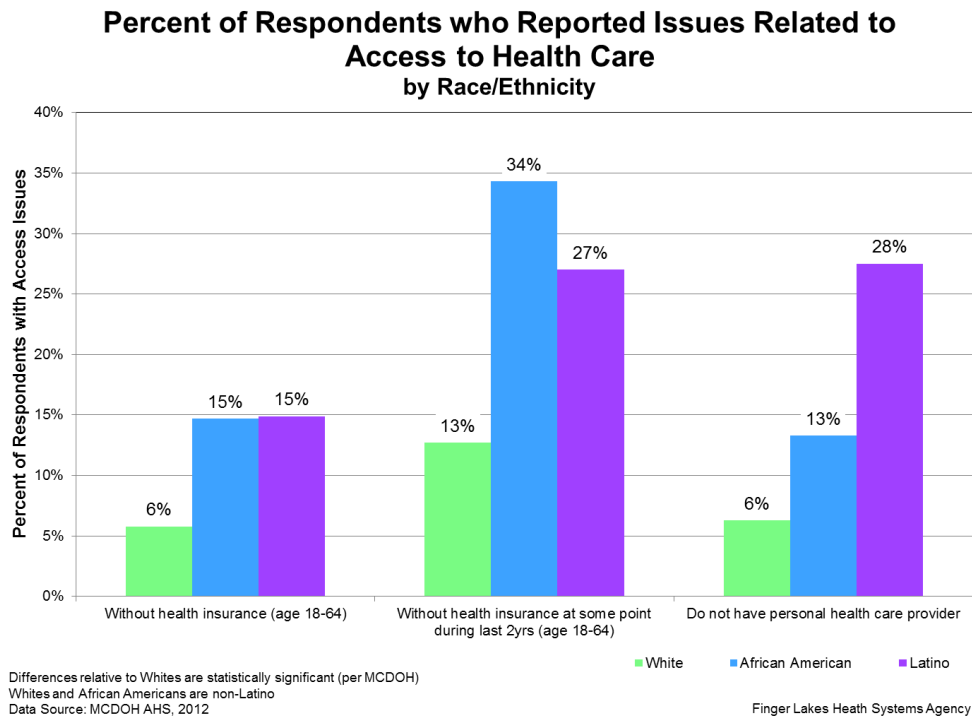
Measures of Lack of Primary Care

Perhaps as a result of a shortage of physicians in the Target Area and a relative lack of health insurance, a substantial portion of this community does not have a personal health care provider, (e.g., a family doctor). Over 15% of those living in the Target Area reported not having a personal provider compared to about 8% of those in the rest of the county. Furthermore, it appears the lack of health insurance in the Target Area is having tangible effects on health care use as over 15% of individuals living in this geography report facing cost barriers compared to just 7.5% of those living in the balance of the county (Figure 57).

Figure 57

**Percent of Respondents Who Reported Issues Related
to Access to Health Care**
By Geography, Monroe County, 2012

Differences are statistically significant (per MCDOH)
Focus Area = ZIP codes 14605, 14613, 14621
Data Source: MCDOH AHS, 2012
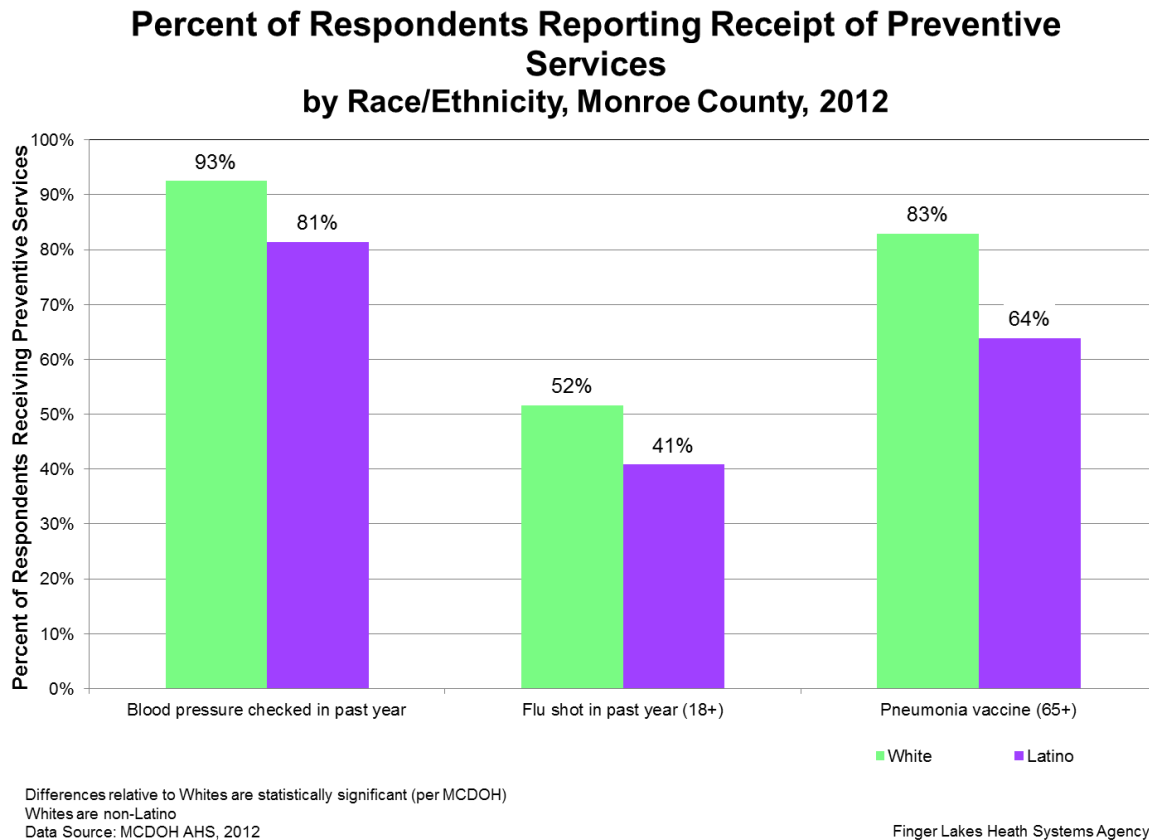
Finger Lakes Heath Systems Agency
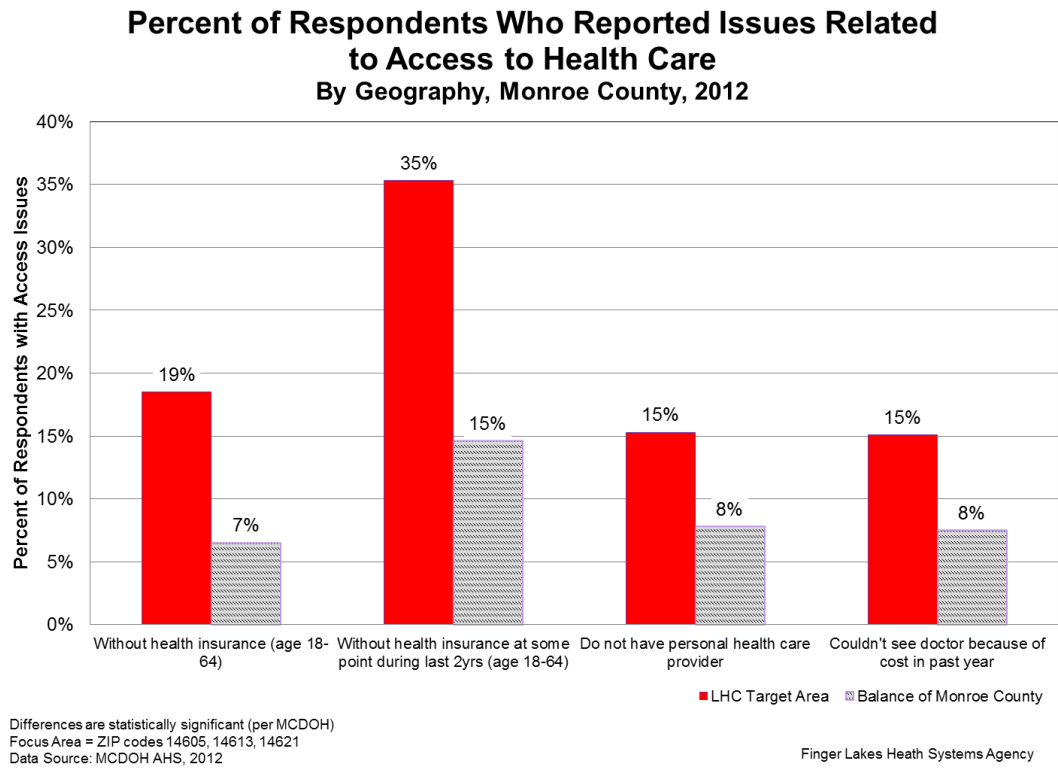
Detachment from the health care system appears to be most pronounced in the Latino population as 28% of Hispanics reported not having a personal health care provider in contrast to just 13% of African Americans and 6% of Whites in Monroe County (Figure 58).

Figure 58

Percent of Respondents who Reported Issues Related to Access to Health Care
by Race/Ethnicity

Differences relative to Whites are statistically significant (per MCDOH)
Whites and African Americans are non-Latino
Data Source: MCDOH AHS, 2012

Finger Lakes Heath Systems Agency

This lack of a primary care provider has the potential to create significant barriers to a variety of services ranging from screenings for various diseases and modifiable risk factors like high blood pressure to the administration of important vaccines. The AHS survey asks several questions about the receipt of preventive and primary care services; from these questions we see some manifestation of these potential obstacle to receiving care (Figure 59).

Figure 59

Percent of Respondents Reporting Receipt of Preventive Services
by Race/Ethnicity, Monroe County, 2012

Differences relative to Whites are statistically significant (per MCDOH)
Whites are non-Latino
Data Source: MCDOH AHS, 2012

Finger Lakes Heath Systems Agency

Latinos were not found to receive cholesterol tests or mammograms, pap smears, and colorectal cancer screenings at rates significantly different from Whites; however, they were significantly less likely to have received a blood pressure screening, flu shot, or pneumonia vaccine in the past year. The lack of these relatively inexpensive preventive measures likely increase one's risk for more severe downstream health issues and may contribute to existing ethnic health disparities.

Other metrics can provide further evidence about the adequacy of primary care received by Latinos. One such indicator is the number of persons who present at the emergency department (ED) and are subsequently treated and released without a hospital admission. Looking at these types of events provides a crude estimate of ED visits which could have been more appropriately handled (often at lower cost) in a primary care setting. Figure 60 illustrates Latinos outside the Target Area experience a higher rate of treat-and-release visits than Whites in the same geography. Within the Target Area, all racial and ethnic groups experience considerable increases in the rate of treat-and-release visits, with Latinos again having a higher rate compared to Whites in the same area.

Figure 60

ED Treat and Release Visits
By Race/Ethnicty and Geography
5 Year Average (2006-2010)

Focus Area = ZIP codes 14605, 14613, 14621
Rates are age-sex adjusted to the US 2000 population
Whites and African Americans are non-Latino
Source: NYS SPARCS

Finger Lakes Heath Systems Agency
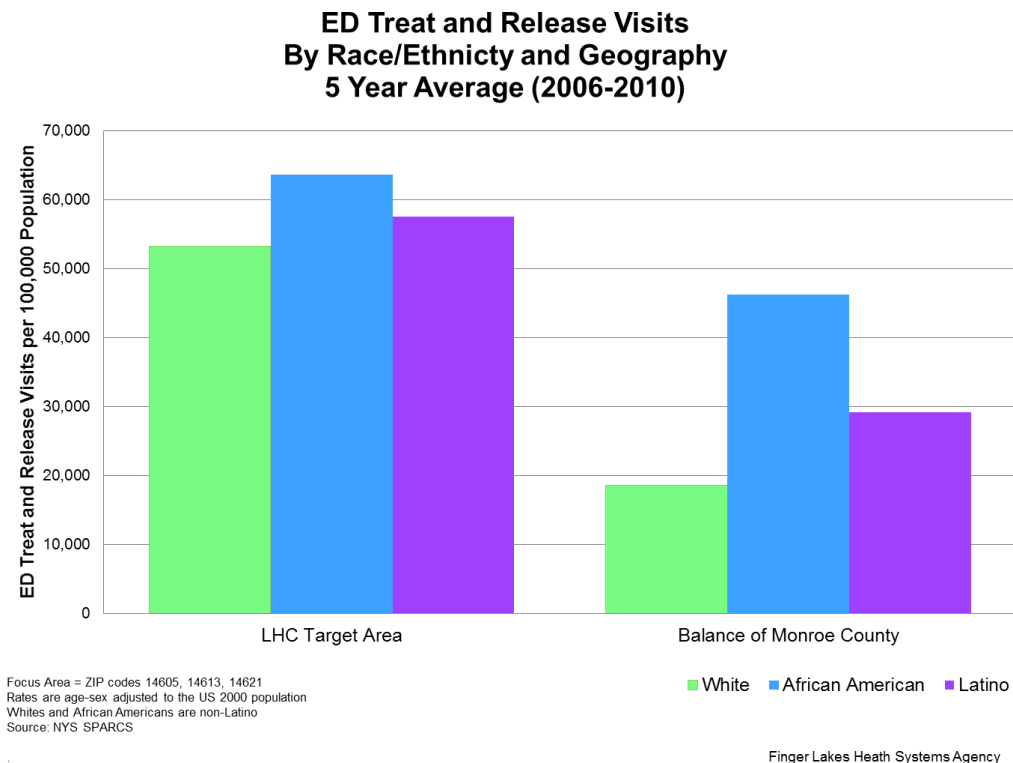
Another way to measure the adequacy of primary care and access to it is the number of hospitalizations for medical conditions which, if adequate primary care had been received, the risk of admission would have been reduced. For example, if a person were cared for and trained to respond to problems with asthma, most would not require a hospital admission for asthma distress. Developed by the federal Agency for Healthcare Research and Quality, such admissions are called Prevention Quality Indicators (PQIs) and are measured as number of PQI admissions per 100,000 population. The PQI rates are not a reflection on the services of the hospitals – those presenting for care need the hospital care – but rather the lack of prevention and primary care that led to the medical crisis. Figure 61 shows that the Target Area has some of the highest rates of PQI admissions in the county.

Figure 61

Adult & Pediatric Prevention Quality Indicators
2010 Hospitalizations per 100,000
by Zip Code

Adult and Pediatric PQI Rates
2010 Hospitalizations per 100,000
- 1,500 to 3,000
- 1,100 to 1,500
- 700 to 1,100
- 0 to 700

Rates are Age-Adjusted
Calculated by Finger Lakes Health Systems Agency
Data Source: NYS DOH SPARCS files
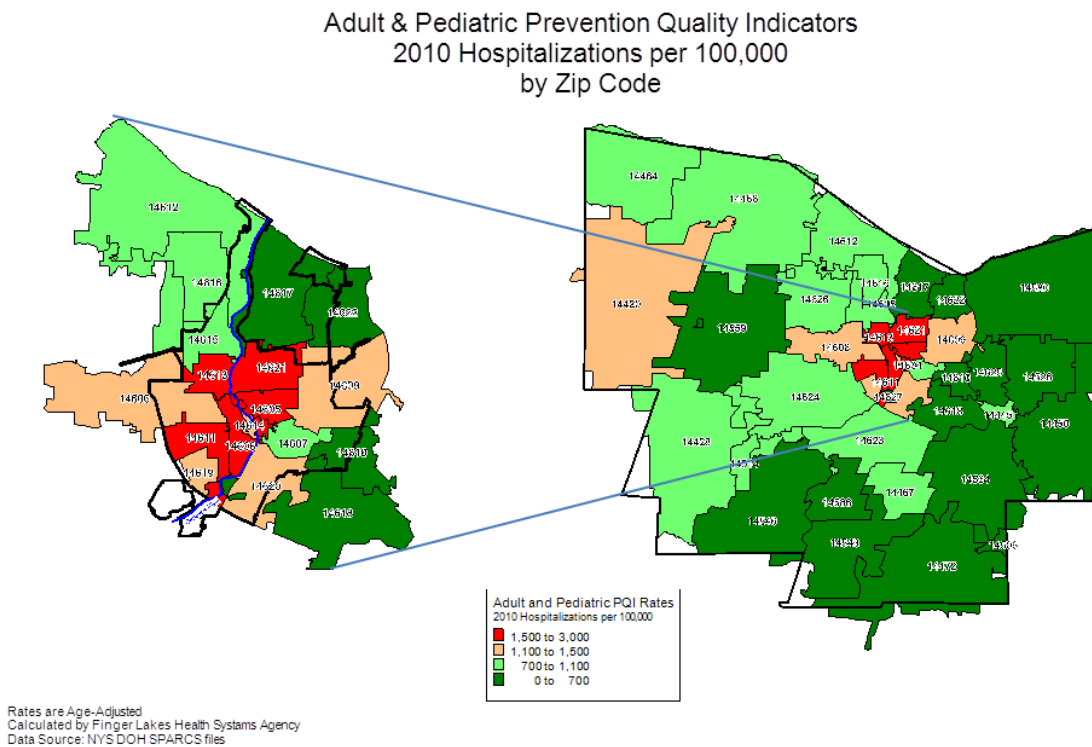
Furthermore, PQI admissions are more prevalent among minority populations. Figure 62 demonstrates that Latinos experience higher rates of PQI hospitalizations as compared to Whites both inside and out of the Target Area, further suggesting ethnic and geographic differences in access to preventive and primary care services.

Figure 62

PQI Hospitalizations
By Race/Ethnicity and Geography
5-year Average (2006-2010)

Focus Area = ZIP codes 14605, 14613, 14621
Rates are age-sex adjusted to the US 2000 population
Whites and African Americans are non-Latino
Data Source: NYS SPARCS

Finger Lakes Heath Systems Agency
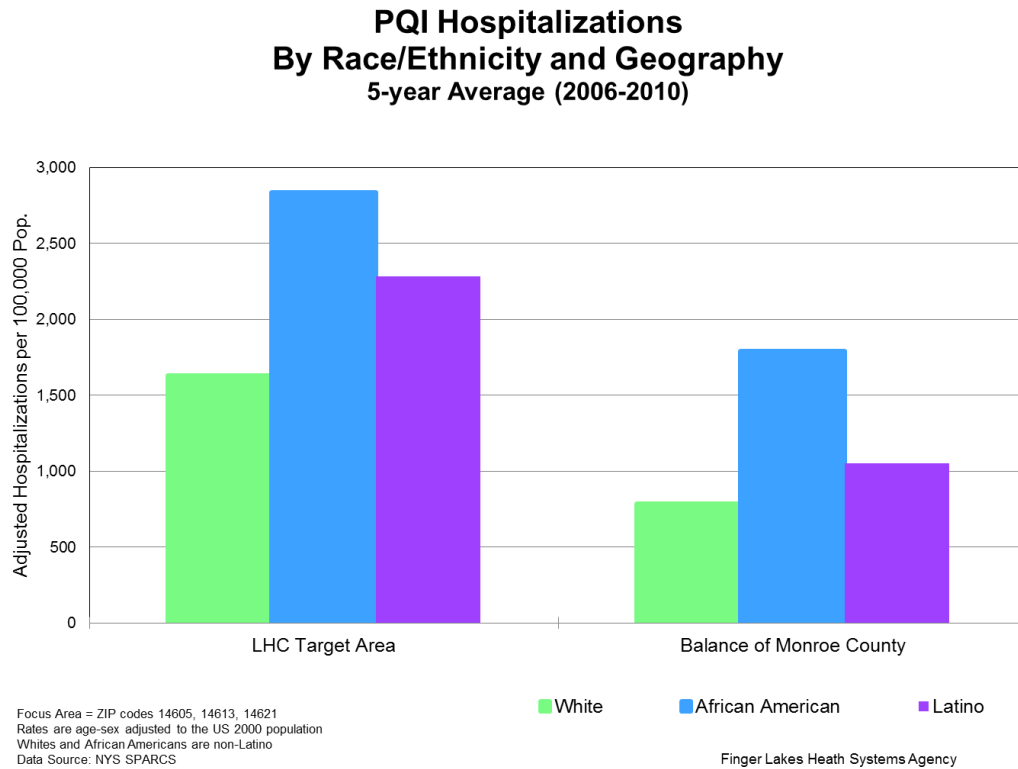
Figure 63 provides a breakdown of these potentially avoidable admissions by the underlying condition that caused the hospital visit. One can see that diabetes, respiratory, and circulatory conditions appear to be the drivers of observed ethnic disparities in Monroe County.

Figure 63

PQI Hospitalizations by Race/Ethnicity and Type
Monroe County
5-Year Avg. ('06-'10)

Rates are age-sex adjusted to the US 2000 population
Whites and African Americans are non-Latino
Data Source: NYS SPARCS

Finger Lakes Heath Systems Agency
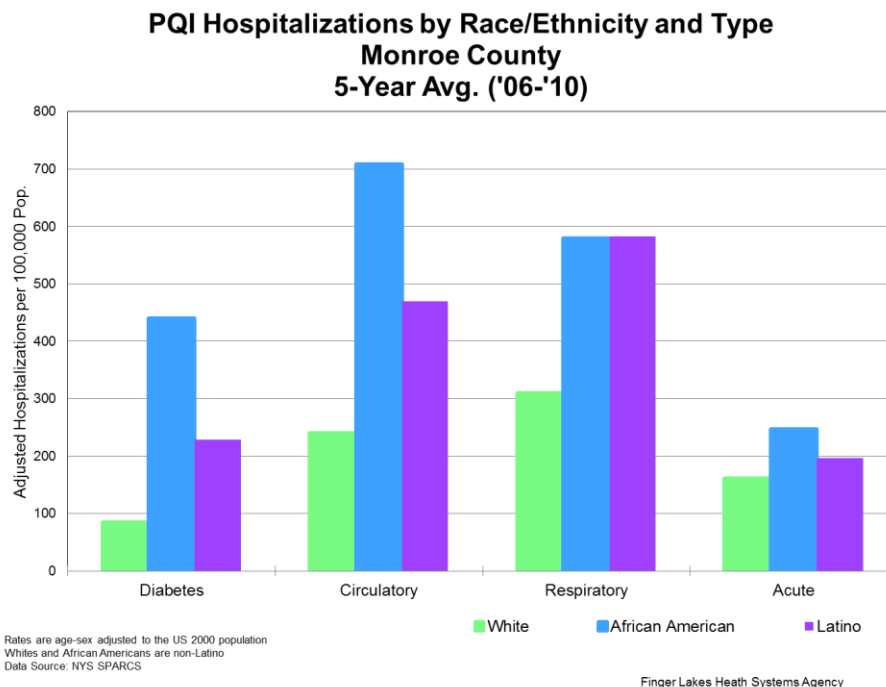
This is interesting for two reasons. First, these three conditions are closely linked to many of the behaviors (i.e. – diet and exercise) discussed in the Health Behaviors chapter that demonstrated clear discrepancies between Whites and Latinos. Second, diabetes, circulatory disease, and respiratory disorders require a fairly complex level of proper care management to slow disease progression and limit adverse outcomes. This suggests that the previously discussed restrictions in access to primary care experienced by Latinos and Target Area residents may also be resulting in an inability to successfully manage complicated conditions. Once an individual develops a chronic disease, like heart disease, diabetes, or COPD, the proper response typically requires ongoing clinical monitoring, a complex regimen of treatments and prescription medications, and behavioral modification to prevent adverse outcomes like permanent disability or death. Without proper access to the health care system or an adequate support system, it is very difficult to adhere to the optimal course of care.

Diabetes can be used as an illustration of how inadequate disease management can lead to poor and disparate health outcomes. According to the AHS, 19% of Latinos over the age of 34 in Monroe County have ever been told they have diabetes, a rate not found to be significantly different from the one reported by Whites in the same age group. When looking at the rate of PQI hospitalizations related to the diagnosis of diabetes, however, we see that Latinos were roughly three times as likely to be hospitalized for an issue that potentially could have been prevented (Figure 64). This finding suggests that the care received by people with diabetes in Monroe County may be uneven across ethnic groups.
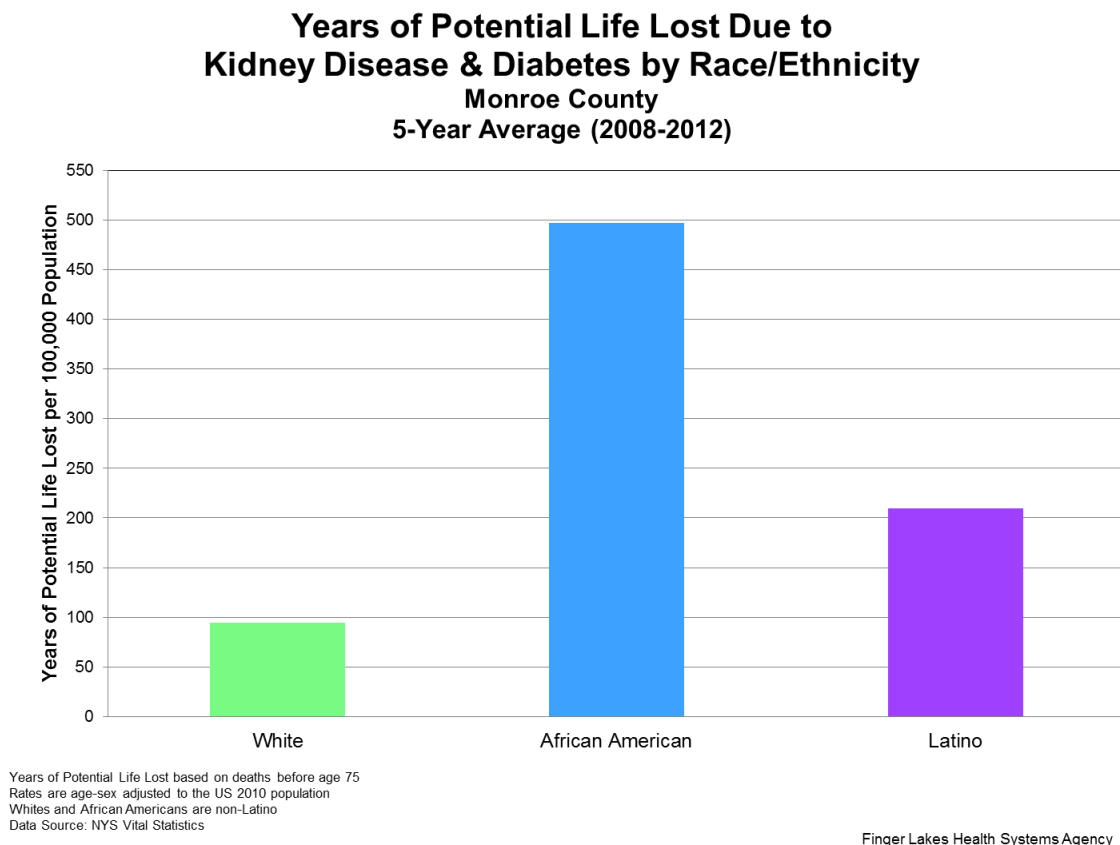
Beyond the short term inconvenience and cost of being hospitalized, poor disease management can have more serious detrimental effects. As seen below, Latinos with diabetes were more than twice as likely to have been hospitalized for a lower extremity amputation compared to Whites. This is a stark example of how upstream failures in care management, both on the part of the patient and his or her family and the health care system as a whole, can lead to a life altering progression of what likely should have been a manageable illness.

Figure 64

Diabetes Hospitalizations
By Type and Race/Ethnicity
Monroe County, 5-Year Average (2006-2010)

Rates are age-sex adjusted to the US 2000 population
Whites and African Americans are non-Latino
Source: NYS SPARCS

Finger Lakes Heath Systems Agency
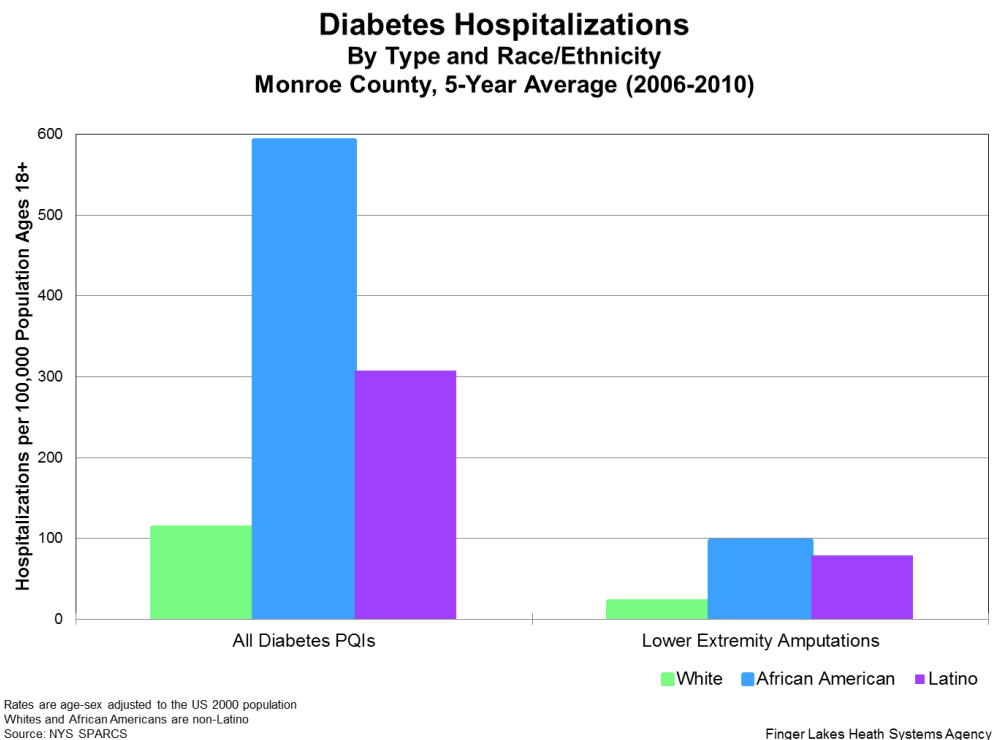
Complications potentially go beyond lower extremity amputations, however. Failure to appropriately treat diabetes can also lead to premature death. Figure 65 shows that Latinos experience more than twice the rate of YPLL due to diabetes and kidney disease (a condition closely linked with diabetes), despite the fact that no difference was found in the rates of having a diabetes diagnosis between Whites and Latinos. Numerous factors determine whether or not an individual dies prematurely from diabetes, yet this finding is suggestive of disparate experiences within the health care system.

Figure 65

Years of Potential Life Lost Due to Kidney Disease & Diabetes by Race/Ethnicity
Monroe County
5-Year Average (2008-2012)

Years of Potential Life Lost based on deaths before age 75
Rates are age-sex adjusted to the US 2010 population
Whites and African Americans are non-Latino
Data Source: NYS Vital Statistics

Finger Lakes Health Systems Agency

While the overall effect of medical care on the health status of a population is thought to be small in proportion to the other determinants, this area remains an important means through which disparities can be reduced and equality, both in terms of opportunity and health, in our community can be improved. Based on the findings presented here, special attention should be given to improving the availability of primary care and promoting attachment to the health care system among Latinos, and particularly those with chronic diseases, through community outreach and the removal of cost-related barriers.

VIII.   Discussion

Ethnic health disparities exist in our community. It is clear that at both the county and region level, Latinos experience a disproportionate rate of premature mortality compared to Whites. Also, Latinos in Monroe County self-report worse overall health and higher levels of functional limitations due to physical health in relation to Whites, as well as the highest rates of mental health issues of any racial or ethnic group examined.

Looking at the various determinants of health, it may not be surprising that Latinos suffer disparate health outcomes. In Monroe County, they experience high rates of poverty and unemployment, low levels of educational attainment, and a high proportion of single-parent households. They fare even worse on these social circumnstances when the area of interest is restricted to the Target Area, a region marked by numerous detrimental features in terms of both the physical and social environment. Furthermore, Latinos in Monroe County are less likely than Whites to have health insurance and are the least likely of all racial/ethnic groups to have a personal healthcare provider. In total, these various factors conspire to create significant barriers to good health for the Latino community. In fact, given the enormity of health challenges faced, one may wonder why Latino health outcomes are not more divergent from that of Whites.

Some explanation likely lies in the positive health behaviors noted previously. Rates of smoking and consumption of sugary drinks comparable to that of Whites likely help to somewhat mitigate many of the negative influences experienced by Latinos. However, there remains ample room for improvements in Latino health habits. Binge drinking is more common among Hispanics, they are less likely to consume one or more fruits and vegetables in a day and participate in leisure time physical activtiy, and they are more likely to consume fast food three or more times per week than Whites. As such, it appears that other factors are helping to mitigate the numerous negative health influences facing Latinos.

One potential contributor mentioned earlier is the potentially protective effect of "*el barrio*." The LHC identified specific communities, such as *La Avenida*, that are strongly Latino, both in terms of demographics and culture. The Coalition hypothesizes that living in such an area, or merely having connections to these cultural epicenters, significantly contributes to social capital and greatly enhances one's network of support. This may enhance health in several different ways, ranging from the abstract (i.e.- lower levels of stress or greater feelings of belonging) to the very tangible (i.e.- free or low cost child care, assistance with activities of daily living, or access to community health centers). This explanation is consistent with the finding that Target Area Latinos generally fare better, in terms of premature mortality, than Whites and African Americans living in the same geography. Indeed, "*los barrios"* are primarily located in the Target Area, a portion of the city of Rochester with living conditions deleterious enough to largely erase the traditional health advantage experienced by Whites. As such, it is plausible that Latinos living in such a neighborhood receive some health benefits from their strong social network.

A recent systematic review of the literature found even more favorable outcomes for Latinos at a national level: Hispanics tend to live longer than non-Hispanics, despite having higher risk factors for a variety of chronic illnesses (Ruiz, Steffen, & Smith, 2013). One of the authors' potential explanations for this pattern of risk factors and outcomes, termed the Hispanic Mortality Paradox, is that, "…Hispanic culutral values such as *simpatia* (importance of displaying kindness and maintaining interpersonal harmony), *familismo* (importance of keeping warm family relationships), and *personalismo* (valuing and building warm relationships) may help to build strong social support itself, [which] is associated with better health and lower mortality risk" (Gillette, 2013). This pathway clearly has close ties to the "*el barrio*" hypothesis put forth by the Coalition.

However, it is difficult to overlook the fact that Latinos in our community report high rates of physical limitations and poor overall health. Perhaps even more telling are the high rates of mental health issues found in the AHS. This is an area that one would expect to be directly impacted by a strong and supportive social network. An alternative hypothesis put forth in the same article referenced above, is that the acculturation (or lack thereof) of recently immigrated Hispanics helps to create a buffer for the potentially adverse effects of low SES and American culture (Ruiz et al., 2013). This explanation would suggest that as Latinos reach longer tenures in the U.S., this protective buffer will dissapate leading to a growth in ethnic health and mortality disparities. The previously discussed finding that Latinos in Monroe County are among the most likely to be obese but do not present with similarly high rates of YPLL from conditions closely related to obesity may be provide some evidence in support of this postulate. Climbing obesity rates could very well be an intermediate health signal among Latinos with increasing levels of acculturation that forecasts future health issues.

Explaining the root causes of the Hispanic Mortality Paradox is a complex and somewhat controversial task that is beyond the scope of this report, yet giving some consideration to the two aforementioned mechanisms can provide a means for leveraging the strengths of the Latino culture and community to help prevent what may be growing public health issue.

References

Antecol, H., & Bedard, K. (2007). Does single parenthood increase the probability of teenage promiscuity, substance use, and crime? *Journal of Population Economics, 20*(1), 55-71.

Baicker, K., Taubman, S. L., Allen, H. L., Bernstein, M., Gruber, J. H., Newhouse, J. P., . . . Finkelstein, A. N. (2013). The Oregon experiment—effects of Medicaid on clinical outcomes. *New England Journal of Medicine, 368*(18), 1713-1722.

Baum, A., Garofalo, J., & Yali, A. (2006). Socioeconomic status and chronic stress: Does stress account for SES effects on health? *Annals of the New York Academy of Sciences, 896*(1), 131-144.

Buchmueller, T. C., Grumbach, K., Kronick, R., & Kahn, J. G. (2005). The effect of health insurance on medical care utilization and implications for insurance expansion: a review of the literature. *Medical Care Research and Review, 62*(1), 3-30.

Caetano, R., & Hines, A. M. (1995). Alcohol, sexual practices, and risk of AIDS among blacks, Hispanics, and whites. *JAIDS Journal of Acquired Immune Deficiency Syndromes, 10*(5), 554&hyhen.

Campbell, K. E., Marsden, P. V., & Hurlbert, J. S. (1986). Social resources and socioeconomic status. *Social networks, 8*(1), 97-117.

Center for Health Workforce Studies. (2010). Annual New York Physician Workforce Profile: State University of New York University of Albany.

Chen, C.-Y., & Lin, K.-M. (2009). Health consequences of illegal drug use. *Current opinion in psychiatry, 22*(3), 287-292.

Cohen, D. A., Mason, K., Bedimo, A., Scribner, R., Basolo, V., & Farley, T. A. (2003). Neighborhood physical conditions and health. *Journal Information, 93*(3).

DeVol, R., Bedroussian, A., Charuworn, A., Chatterjee, A., Kim, I., & Kim, S. (2007). An unhealthy America: The economic burden of chronic disease. *Santa Monica, CA: Milken Institute*.

Diet and Physical Activity: a Public Health Priority. (2013). *Global Strategy on Diet, Physical Activity and Health.* 2013, from http://www.who.int/dietphysicalactivity/en/

Diez Roux, A. V., & Mair, C. (2010). Neighborhoods and health. *Annals of the New York Academy of Sciences, 1186*(1), 125-145.

Environmental Protection Agency. (2013). Brownfields and Land Revitalization. from http://www.epa.gov/brownfields/

Ewart, C. K., & Suchday, S. (2002). Discovering how urban poverty and violence affect health: development and validation of a Neighborhood Stress Index. *Health Psychology, 21*(3), 254.

Farley, T. A., Rice, J., Bodor, J. N., Cohen, D. A., Bluthenthal, R. N., & Rose, D. (2009). Measuring the food environment: shelf space of fruits, vegetables, and snack foods in stores. *Journal of Urban Health, 86*(5), 672-682.

Feinstein, J. S. (1993). The relationship between socioeconomic status and health: a review of the literature. *The Milbank Quarterly*, 279-322.

Gillette, H. (2013, 2/28/2013). Hispanic Paradox- Latest findings confirm Latinos live longer, *Saludify*. Retrieved from http://saludify.com/hispanic-paradox-live-longer/

Goldberg, R. J., Burchfiel, C. M., Reed, D. M., Wergowske, G., & Chiu, D. (1994). A prospective study of the health effects of alcohol consumption in middle-aged and elderly men. The Honolulu Heart Program. *Circulation, 89*(2), 651-659.

Grønbæk, M. (2009). The positive and negative health effects of alcohol-and the public health implications. *Journal of internal medicine, 265*(4), 407-420.

Harper, C. C., & McLanahan, S. S. (2004). Father absence and youth incarceration. *Journal of Research on Adolescence, 14*(3), 369-397.

Health Effects of Cigarette Smoking. (2012). *Smoking and Tobacco Use.* from http://www.cdc.gov/tobacco/data_statistics/fact_sheets/health_effects/effects_cig_smoking/

The Health Effects of Overweight and Obesity. (2011). 2013, from
http://www.cdc.gov/healthyweight/effects/index.html

Health Pregnancy Fact Sheet. (2006). *Family and Community Health.* 2013, from
http://www.health.ny.gov/community/pregnancy/health_care/healthy_pregnancy_fact_sheet.htm

Henriksen, L., Schleicher, N. C., Feighery, E. C., & Fortmann, S. P. (2010). A longitudinal study of exposure to retail cigarette advertising and smoking initiation. *Pediatrics, 126*(2), 232-238.

Holt-Lunstad, J., Smith, T. B., & Layton, J. B. (2010). Social relationships and mortality risk: a meta-analytic review. *PLoS Medicine, 7*(7), e1000316.

How Much Physical Activity Do Adults Need? (2011). *Physical Activity.* 2013, from
http://www.cdc.gov/physicalactivity/everyone/guidelines/adults.html

Incidence, Prevalence, and Cost of Sexually Transmitted Infections in the United States. (2013) *CDC Fact Sheet*: Centers for Disease Control and Prevention.

Infant Mortality. (2012). *Reproductive Health.* 2013, from
http://www.cdc.gov/reproductivehealth/MaternalInfantHealth/InfantMortality.htm

Juster, R.-P., McEwen, B. S., & Lupien, S. J. (2010). Allostatic load biomarkers of chronic stress and impact on health and cognition. *Neuroscience and biobehavioral reviews, 35*(1), 2.

Jylhä, M. (2009). What is self-rated health and why does it predict mortality? Towards a unified conceptual model. *Social science & medicine, 69*(3), 307-316.

Key, T. J., Allen, N. E., Spencer, E. A., & Travis, R. C. (2002). The effect of diet on risk of cancer. *Lancet, 360*(9336), 861-868.

Khantzian, E. J. (1997). The self-medication hypothesis of substance use disorders: a reconsideration and recent applications. *Harvard review of psychiatry, 4*(5), 231-244.

Landrigan, P. J., Schechter, C. B., Lipton, J. M., Fahs, M. C., & Schwartz, J. (2002). Environmental pollutants and disease in American children: estimates of morbidity, mortality, and costs for lead poisoning, asthma, cancer, and developmental disabilities. *Environmental Health Perspectives, 110*(7), 721.

Litt, J. S., Tran, N. L., & Burke, T. A. (2002). Examining urban brownfields through the public health" macroscope". *Environmental Health Perspectives, 110*(Suppl 2), 183.

Manning, W. G., Newhouse, J. P., Duan, N., Keeler, E. B., & Leibowitz, A. (1987). Health insurance and the demand for medical care: evidence from a randomized experiment. *The American Economic Review*, 251-277.

Marmot, M. (2005). Social determinants of health inequalities. *Lancet, 365*(9464), 1099-1104.

McGinn, A. P., Evenson, K. R., Herring, A. H., Huston, S. L., & Rodriguez, D. A. (2007). Exploring associations between physical activity and perceived and objective measures of the built environment. *Journal of Urban Health, 84*(2), 162-184.

McGinnis, J. M., Williams-Russo, P., & Knickman, J. R. (2002). The case for more active policy attention to health promotion. *Health Affairs, 21*(2), 78-93.

Moore, L. V., Roux, A. V. D., Nettleton, J. A., & Jacobs, D. R. (2008). Associations of the Local Food Environment with Diet Quality—A Comparison of Assessments based on Surveys and Geographic Information Systems The Multi-Ethnic Study of Atherosclerosis. *American Journal of Epidemiology, 167*(8), 917-924.

Novak, S. P., Reardon, S. F., Raudenbush, S. W., & Buka, S. L. (2006). Retail tobacco outlet density and youth cigarette smoking: a propensity-modeling approach. *Journal Information, 96*(4).

Pflieger, J. C., Cook, E. C., Niccolai, L. M., & Connell, C. M. (2013). Racial/Ethnic Differences in Patterns of Sexual Risk Behavior and Rates of Sexually Transmitted Infections Among Female Young Adults. *American Journal of Public Health*(0), e1-e7.

Project HOPE. (2012). 2012 HOPE Voice of the Community Survey: Ibero-American Development Corporation.

Reyes, J. W. (2007). Environmental policy as social policy? The impact of childhood lead exposure on crime. *The BE Journal of Economic Analysis & Policy, 7*(1).

Risk Factors. (2013). *Sexually Transmitted Diseases.* from http://www.mayoclinic.com/health/sexually-transmitted-diseases-stds/DS01123/DSECTION=risk-factors

Ross, C. E., & Wu, C.-l. (1995). The links between education and health. *American Sociological Review*, 719-745.

Ruiz, J. M., Steffen, P., & Smith, T. B. (2013). Hispanic Mortality Paradox: A Systematic Review and Meta-Analysis of the Longitudinal Literature. *American Journal of Public Health, 103*(3), e52-e60.

Sarkadi, A., Kristiansson, R., Oberklaid, F., & Bremberg, S. (2008). Fathers' involvement and children's developmental outcomes: a systematic review of longitudinal studies. *Acta Paediatrica, 97*(2), 153-158.

Schroeder, S. A. (2007). We can do better—improving the health of the American people. *New England Journal of Medicine, 357*(12), 1221-1228.

Scribner, R. A., Cohen, D. A., & Fisher, W. (2000). Evidence of a structural effect for alcohol outlet density: a multilevel analysis. *Alcoholism: Clinical and Experimental Research, 24*(2), 188-195.

Sexually Transmitted Diseases. (2012). *2020 Topics & Objectives.* from http://www.healthypeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=37

Sharp, B. (2012). City Tries to Clean Up Corner Stores, *Democrat and Chronicle*.

Starfield, B., Shi, L., & Macinko, J. (2005). Contribution of primary care to health systems and health. *Milbank quarterly, 83*(3), 457-502.

Ten Significant Public Health Achievements- United States, 2001-2010: Motor Vehicle Safety. (2011). *Injury Prevention & Control: Motor Vehicle Safety.* from http://www.cdc.gov/Motorvehiclesafety/mmwr_achievements.html

Violent Crime Rate- Monroe County. (2011). *County Health Rankings.* from http://www.countyhealthrankings.org/app/new-york/2012/measures/factors/43/map

Warburton, D. E., Nicol, C. W., & Bredin, S. S. (2006). Health benefits of physical activity: the evidence. *Canadian medical association journal, 174*(6), 801-809.

APPENDIX A

History of Minority Health Reports at Finger Lakes Health Systems Agency

Finger Lakes Health Systems Agency (FLHSA) and its predecessor agencies have long been concerned and focused on the health of underserved and inappropriately served communities, such as the African American and Latino communities. However, in 1979 the Urban League of Rochester and its Executive Director William Johnson, in a letter to FLHSA, reproached the Agency and the United Community Chest for not doing more regarding disparities in access to health care and health status of the region's minority populations. Mr. Johnson quoted from the Urban League of Rochester's report, "The State of Black Rochester 1978":

> It is hard to believe that the Finger Lakes Health Systems Agency can conduct health planning for the entire region and have no comprehensive data on the region's minorities. It is equally as difficult to accept that this information does not exist at the United Community Chest. These two agencies are uniquely qualified, as evidenced by their joining forces to access and evaluate and plan for selected health services in the area, to accomplish this critically needed service. The Chest and the HSA should immediately institutionalize the monitoring and reporting of minority health status, until such time that it no longer is necessary.

In response, FLHSA assembled a Minority Health Task Force. In 1980, FLHSA staff released a report citing the relative lack of data, and poor data quality, concerning markers of minority health. Nonetheless, in early 1981 the Task Force issued an "Interim Report." The "Interim Report" listed in outline format health problems relevant to non-white and other minority populations. Many of those problems persist to this day, while others have largely been resolved. As a complement to the statistical data, a Task Force member also performed an informal opinion survey of minority health leaders concerning minority health needs and ways to address them. Those leaders suggested a number of changes needed in the health care system to make it more responsive to minority patients and also suggested societal changes that needed to be addressed:

> There is need to recognize the social problems of minorities (low socio-economic status and discrimination) as truly community health problems. The social issues of health should be part of the major issues of health today.

> There is need to recognize that physical and mental health problems experienced by minorities are not only a result of their generally lower socio-economic status but to the stress of living in a hostile, racist environment. An awareness of the genesis of stress and its effects on health and mental health is needed.

These two themes – the social causes underlying some of the disparities in health of minority populations and the impact of place of residence and social stress on health – have been consistent throughout FLHSA work in minority health and will be an element in this report.

Loss of federal funding under the Reagan administration reduced the Agency's focus on population health, although substantial reporting of African American and Latino health indicators was included in the FLHSA 1985 "Health Systems Plan."

Still, in 1998, a community activist challenged the Agency on its lack of focus on Latino health. Again, staff were concerned about relative lack of data and the quality of what data existed. In response the Hispanic Health Task Force was developed, and in 1999 "*Nuestra Salud"* (Our Health) was published. The report provided statistics concerning the health of the Latino community and discussed the cultural underpinnings of some of the disparities observed. The relatively small number of persons of Latino heritage in the region residing outside Monroe County did not allow for separate analysis of the health of that population, but the Task Force concluded that most of the Hispanic health and health care issues observed in Monroe County were also operative in the counties outside Monroe.

In 2002, FLHSA seated the African American Health Status Task Force (AAHTF), comprised of leadership in the African American community and health care providers. This Task Force was charged with studying the health status of African Americans in the region and identifying the disparities between African Americans and the rest of the community. In a 2003 report entitled "What's Goin' On?," the AAHTF developed a series of recommendations about reducing the disparities identified. The report introduced the concept of "place" in conjunction with race and socio-economics as determinants of health and sources of disparity.

In 2004, "*Nuestra Salud Hoy*!" (Our Health Today) was published, updating Latino health data.

In 2007, the FLHSA established these two task forces as ongoing health coalitions. Renamed the Latino Health Coalition (LHC) and the African American Health Coalition (AAHC), these community groups joined in the work of evolving community health planning so that it incorporated eliminating health disparities through community engagement. In 2008, the LHC issued an update to the "*Nuestra Salud*" Report. This report brought focus on the need to address the social determinants of health as a central strategy to disparities elimination and highlighted the role that Coalition members, themselves, could play as catalysts for health care improvement.

As a result of this report, and the new Community Engagement effort of the FLHSA, LHC members became active contributors to other community health improvement activities including the FLHSA/RBA High Blood Pressure Collaborative and the Healthi Kids Initiative.

APPENDIX B

METHODOLOGY

Years of Potential Life Lost (YPLL) provide a standardized way to capture premature mortality and give greater weight to deaths which occur at young ages. This indicator is calculated in relation to a reference age which is commonly set at 75. In order to allow for comparability with other community and national reports, that convention is followed here. Measurement computation is as follows:

$$YPLL = \begin{cases} 75 - Age\ at\ Death & if\ Age\ at\ Death < 75 \\ 0 & if\ Age\ at\ Death \geq 75 \end{cases}$$

In order to determine the YPLL within a community, the above value is summed for each death within the given time frame. Additional adjustments are then made to account for differences in the age and gender distribution of the population of interested, with the final result being reported as a standardized rate (YPLL per 100,000 Population).

MONROE COUNTY DEPARTMENT OF PUBLIC HEALTH ADULT HEALTH SURVEY

The Monroe County Adult Health Survey (AHS) was a countywide random digit dial telephone survey completed by adults aged 18 and older. The purpose of the survey was to provide data on the prevalence of health behaviors and health status indicators among adult residents of Monroe County. The sample was designed to "over-sample" the City of Rochester in order to achieve adequate numbers of African Americans, Latinos and older adults. Data were weighted to account for both unequal chances of selection, non-response rates, and to match the Monroe County population distribution for age, sex, race and Latino Origin.

DEFINING RACIAL/ETHNIC GROUPS

U.S. Census: The U.S. Census allows individuals to choose one or more races to identify themselves. Identification as Latino is a separate question; an individual can identify as a Latino in addition to selecting a race(s). For this report, the category "Black or African American alone or in combination with one or more other races, not Hispanic or Latino" was selected for use in the analysis. This selection represented a change from previous reports, which used "Black or African American alone, not Hispanic or Latino." The change was made in view of the growth in the number of respondents choosing more than one race. In Rochester and Monroe County, the residence of most African Americans in the region, 95% and 93% respectively of African Americans alone or in combination, not Latino identified themselves as African American alone. Data for "White alone, not Hispanic or Latino" are used for Whites. Individuals identifying as Latino are considered Latino, regardless of racial identification.

American Community Survey: The American Community Survey (ACS) allows the same multiple racial identification possibilities as the Census as well as separate identification as Latino. However, because the ACS uses a sample of the total population, fewer racial/ethnic groupings may be available for analysis. In this region the sole African American category available is "African American alone," which would include individuals also identifying themselves as Latino. Data on "White alone, not Latino" and "Latino" are available. This report includes education and poverty data from the ACS.

New York State SPARCS: SPARCS asks that the code that best describes the patient be utilized; the choices are white, black, Native American, Asian, Pacific Islander, other race, and unknown. Latino identification is a separate question. SPARCS is the source of the report's hospitalization and emergency department data.

Vital Statistics: Vital Statistics are used in this report for data regarding mortality, cause of death, and years of potential life lost. Vital Statistics currently allows for multiple races and for Latino identification for each individual. The data in this report use the categories of "African American alone, not Latino," "White alone, not Latino," and "Latino."

Monroe County Adult Health Survey: The Adult Health Survey (AHS) allows respondents to identify as Latino and to choose more than one racial identification; if they choose more than one race, they are asked which race best describes them.

About the Agency and Coalition

Finger Lakes Health Systems Agency (FLHSA) is an independent community health planning organization working collaboratively with multi-stakeholder groups to improve health quality and access and eliminate health care disparities. The agency envisions Rochester and the Finger Lakes region becoming America's healthiest community with health equity for all people in the region, while serving as a national model for continuous improvement in community health, health care cost and quality. Its mission is to achieve this vision by bringing into focus community health issues via data analysis, community engagement and by implementing solutions through community collaboration and partnership.

FLHSA serves communities in the nine-county Finger Lakes region of Chemung, Livingston, Monroe, Ontario, Schuyler, Seneca, Steuben, Wayne, and Yates counties. As a non-profit organization, FLHSA is governed by a board of directors composed of leaders from hospitals, insurers, health care providers, business, human-service agencies, education, government, and consumers. Agency leadership and staff include health-data experts, physicians, and community advocates who are highly educated and richly experienced in health care, data analysis, and community outreach.

The agency works in partnership with numerous community stakeholders, such as payers, hospitals, clinicians, nursing homes, the business community, government, and educational institutions. Ongoing efforts to drive change in the health care system focus on three key elements:

• System performance – setting realistic performance targets and measuring and reporting results.
• Capacity management – proactively collecting and analyzing data, then working with stakeholders to develop recommendations.
• Community engagement – sharing health-status information with affected populations and working with community leaders to set priorities, develop action plans, and educate and mobilize consumers to improve their health.

About the Latino Health Coalition

The Latino Health Coalition strives to eliminate health disparities among Latinos in our community by engaging leaders to design solutions to top priorities, from youth risk behaviors to health literacy, economic stress, mental health, and cultural competency.

Using non-medical interventions, the Coalition works to improve the scope, quality and availability of health services. It also seeks to mobilize members of the community in health promotion, health education, and the practice of positive health behaviors, as well as to improve community health status through public policy and health systems advocacy.