

GRAND RAPIDS

**African American
Health Institute**

Economic Impact of Health Inequalities in Grand Rapids, Michigan

Grand Rapids African American Health Institute

BBC
RESEARCH &
CONSULTING

Report

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Economic Impact of Health Inequalities in Grand Rapids, Michigan

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Table of Contents

I. Executive Summary

Study Objectives.....	I-1
Methodology	I-2
Key Results	I-3
Implications of Results	I-3

II. Economic Impact Analysis Methodology

Approach Overview.....	II-1
------------------------	------

III. Economic Impact of Health Conditions

Heart Disease	III-1
Stroke	III-1
Diabetes.....	III-2
Obesity	III-2
Lung Cancer	III-3
Breast Cancer	III-3
Prostate Cancer.....	III-4
Mental Health.....	III-4
Teenage pregnancy	III-5
HIV	III-5

IV. Recommendations..... IV-1

Appendices

- A. Infographics
- B. Bibliography

SECTION I.

Executive Summary

The Grand Rapids African American Health Institute (GAAHI) was founded in 2002 in Grand Rapids, Michigan to address the health and societal issues that Blacks and other minorities face in Kent County, Michigan due to health inequality. GAAHI's work addresses these issues by empowering minority groups with education, advocacy, and research.

GAAHI commissioned BBC Research & Consulting (BBC) to study the economic impact of health inequalities in Kent County. In this study, BBC examined the costs associated with several chronic diseases and other health conditions. BBC then assessed the economic impacts associated with higher incidence rates of those conditions among Blacks in Michigan and Kent County. This executive summary outlines the processes that the study team used to determine the economic impact and presents key results.

Study Objectives

The BBC study team met with GAAHI to refine study objectives during a project kickoff meeting in September 2016. Those study objectives include:

1. Determine the direct and indirect annual costs per incidence associated with health conditions for which Blacks and other minorities have the biggest inequalities compared to Whites;
2. Determine the economic impact to Michigan and/or Kent County of those health inequalities; and
3. Provide recommendations for disease prevention and education for addressing health inequalities.

Methodology

To begin this study, the study team completed a comprehensive review of current literature to determine the direct and indirect costs associated with chronic diseases and other health conditions in the United States. When possible, the study team identified costs specific to Michigan. Those costs were then used to determine the cost per incidence of chronic diseases and other health conditions affecting Blacks and other minorities at disproportionate rates compared to Whites. The study team used the following steps to determine the economic impacts to Michigan and Kent County:

- **Determination of study health conditions.** BBC worked with GRAAHI to identify 10 health conditions that represent substantial health inequalities for Blacks and other minorities compared to Whites within Kent County. The following conditions were then included as part of the study:
 - Heart disease
 - Stroke
 - Diabetes
 - Breast cancer
 - Lung cancer
 - Prostate cancer
 - Obesity
 - Mental health
 - Teenage pregnancy
 - HIV
- **Literature review.** BBC reviewed existing literature to establish the total direct and indirect costs associated with each of the 10 health conditions included as part of the study. For all 10 health conditions, direct costs consisted of marginal medical costs to treat the medical condition. For all health conditions except teenage pregnancy, indirect costs included loss of productivity for absenteeism and presenteeism (working while ill). Indirect costs for teenage pregnancy include increased use of public programs, such as Medicaid, Children’s Health Insurance Program (CHIP), and Temporary Assistance for Needy Families (TANF).
- **Incidence rates.** Using public data, BBC determined the most current incidence rates for each of the 10 health conditions for Michigan and Kent County, and for Whites and Blacks within Kent County. When incidence rates by race in Kent County were not available, incidence rates by race for Michigan were used.
- **Calculation of economic impact.** BBC used the direct and indirect costs identified as part of the literature review, along with the incidence rates, to calculate the economic impact of each of the 10 health inequalities specifically for Kent County.
- **Development of infographics and report.** In order to visually represent the costs, BBC developed an infographic for each of the 10 health conditions and a summary of all conditions. Those are included in Appendix A of the report.

Additional details on the methodology are included in Section II: Economic Impact Analysis Methodology.

Key Results

BBC's comprehensive literature review revealed key information on which the study team relied to calculate the economic impact of health inequalities in Michigan and Kent County. One study determined the direct and indirect costs associated with seven of the health conditions and included estimates for Michigan.¹ Separate studies estimated the direct and indirect costs associated with obesity, teenage pregnancy, and HIV. The study team then used those estimates to calculate the economic impact of the inequalities associated with the 10 health conditions for Michigan and Kent County. Highlights of the economic impact study include:

- Health inequalities in Michigan and Kent County cost more than \$100 million annually;
- Obesity accounts for more than 50 percent of health inequality costs;
- Of all studied cancers, lung cancer has the highest average yearly per person cost at \$19,500;
- Of the 10 health conditions studied, the highest rate of health inequality for Blacks in Kent County is associated with HIV, which presents at ten times the rate of Whites;
- Three major health behaviors are tied to almost all of the 10 health conditions: smoking, poor nutrition, and sedentary lifestyle; and
- Addressing these three health behaviors can help reduce rates of heart disease, stroke, several types of cancer, obesity, and diabetes.

Full results of the economic impact study can be found in Section III: Economic Impact of Health Conditions.

Implications of Results

In the 2011 Minority Report, GRAAHI found that Blacks “have the worst overall health than any other population group.” There are many reasons for the inequality among Blacks’ health including limited access to adequate health care services; living in underprivileged neighborhoods and food deserts; high rates of sedentary lifestyle; inadequate nutrition; and high rates of obesity. In order to address the health inequalities within Kent County, it is important to address the health behaviors that contribute most significantly to chronic diseases, especially heart disease, stroke, diabetes, and cancer. The top three health behaviors that contribute to almost all of the studied health conditions are poor nutrition, sedentary lifestyle, and smoking. Addressing these three health behaviors can result in a large return on investment. The American Heart Association states that every dollar spent on community-based programs that focus on these three health behaviors can result in a return on investment of \$5.60. GRAAHI is one such organization that focuses on addressing the health inequality of Blacks and other minorities in Kent County through education, advocacy, and research. Continued efforts of organizations such as GRAAHI can work to reduce the health inequalities of Blacks and other minorities in communities such as Kent County.

SECTION II.

Economic Impact Analysis Methodology

Blacks are afflicted by chronic disease and other serious health conditions at a much higher rate than Whites and other minorities. These health disparities can cost a community, individual, employer, and taxpayer considerably in terms of medical costs (direct costs) and loss of productivity (indirect costs). Several studies have estimated various costs associated with living with and treating a chronic disease or other serious health conditions. For this economic impact study, the direct and indirect costs were used to calculate the total economic impact of health inequalities in Kent County, Michigan.

Approach Overview

Grand Rapids African American Health Institute (GRAAHI) commissioned BBC Research & Consulting (BBC) to conduct an economic impact analysis of health inequalities among Blacks in Kent County. To conduct that analysis, BBC used the following approach.

- Determine the 10 health conditions with the highest health inequalities among Blacks compared to Whites in Kent County;
- Review literature to estimate the economic impact per incidence of living with and treating each of the 10 studied health conditions;
- Determine incidence rates of the 10 studied health conditions in Michigan and Kent County;
- Calculate the economic impact of each study health condition; and
- Calculate the health inequality economic impact to Kent County for each health condition.

Economic impact study health conditions. BBC worked with GRAAHI staff to determine the 10 health conditions that would be included in the economic impact study. These conditions were determined by looking at which health conditions affect Blacks at disproportionately high rates compared to Whites. The following health conditions were included as part of the economic impact study:

- | | |
|-----------------|---------------------|
| ■ Heart Disease | ■ Breast Cancer |
| ■ Stroke | ■ Prostate Cancer |
| ■ Diabetes | ■ Mental Health |
| ■ Obesity | ■ Teenage Pregnancy |
| ■ Lung Cancer | ■ HIV |

Literature review. BBC conducted a comprehensive review of existing literature pertaining to the direct and indirect costs associated with living with and treating chronic health conditions. For this study, BBC reviewed those studies that had the most recent information and included information about both the direct and indirect costs associated with the studied health conditions. When possible, the study team also considered estimated costs specific to Michigan. The direct costs associated with the chronic diseases and other health conditions consist of the marginal medical costs associated with treating that specific condition and are only associated with those individuals that have the chronic disease or condition.

The studies that BBC reviewed and utilized for the economic impact analysis included estimates associated with a number of direct and indirect costs. Direct costs included medical costs associated with each health condition. Indirect costs included costs associated with absenteeism and presenteeismⁱ of both the individual and caretaker and, in the case of teenage pregnancy, the increased cost of use of public programs (i.e., Temporary Assistance for Needy Families, Children’s Health Insurance Program, or other welfare programs). The indirect costs associated with each condition are costs to employers, the government, the individual, and the national or local economy. The studies utilized as part of the economic impact study did not include wage loss due to premature death or costs associated with individuals who are institutionalized in prisons, nursing homes, or military institutions.

One study that BBC utilized as part of the economic impact analysis determined direct and indirect costs per incidence for seven of the 10 study health conditions (heart disease, stroke, diabetes, lung cancer, breast cancer, prostate cancer, and mental health). For this specific study, the costs were calculated on a national and state level.¹ Separate studies were found for obesity, teenage pregnancy, and HIV. The study team compiled information from these various studies to determine the economic impact (direct plus indirect costs) associated with each health condition. Figure 2-1 presents the economic impact of each incidence by health condition. See Appendix B for a complete list of citations.

**Figure 2-1.
Cost per Incidence by Health Condition**

Note:

With the exception of HIV, all costs are direct and indirect costs per incidence per year. HIV is a total lifetime of direct and indirect costs.

*Costs for these conditions are specific to Michigan. All others are costs specific to the United States.

Sources:

DelVol, Ross et al. *An Unhealthy America: The Economic Burden of Chronic Disease*. Milken Institute, 2007, The National Campaign to Prevent Teen and Unplanned Pregnancy, Cawley and Meyerhoefer 2010, and A.B. Hutchinson, et al 2006.

Health Condition	Cost per Incidence
HIV	\$910,800
Lung Cancer	\$19,400 *
Stroke	\$6,900 *
Breast Cancer	\$5,700 *
Prostate Cancer	\$5,400 *
Heart Disease	\$5,200 *
Obesity	\$5,200
Diabetes	\$2,800 *
Mental Health	\$2,100 *
Teenage Pregnancy	\$1,700

ⁱ Presenteeism is defined as employees working while ill which results in reduced productivity.

Incidence rates. The study team used public data to collect incidence rates of each health condition for Michigan and Kent County, as well as for Whites and Blacks within Kent County. The studies used in the economic impact analysis, calculated direct and indirect cost for those individuals living with a health condition (incidence rate), as opposed to costs associated with death from a health condition (mortality rate). Therefore, for the purpose of this economic impact study, full incidence rates of each health condition were used for the economic impact calculation. Figure 2-2 presents the percentage of the total population affected by the health condition. All incidence rates except for HIV and breast cancer are for Kent County. Incidence rates for HIV and breast cancer are for Michigan as a whole.

**Figure 2-2.
Incidence and Inequality by Health Condition**

Note:
Incidence calculations are the total percentage of affected population.

*Incidence rate are for Michigan.

Source:
Kent County BRFFS 2014; Centers for Disease Control and Prevention; and the Michigan Department of Health & Human Services.

Health Condition	Whites Affected	Blacks Affected	Inequality Percentage
HIV*	<0.01%	0.04%	1000%
Lung Cancer	0.06%	0.10%	167%
Stroke	3.90%	8.10%	208%
Breast Cancer*	0.12%	0.13%	108%
Prostate Cancer	0.06%	0.08%	133%
Heart Disease	5.20%	5.80%	112%
Obesity	26.20%	46.00%	176%
Diabetes	8.50%	18.90%	220%
Mental Health	6.50%	15.10%	232%
Teenage Pregnancy	0.03%	0.07%	233%

Calculation of economic impact. To determine the economic impact of each health inequality, the study team first calculated the total cost of each health condition by taking the total direct and indirect costs per incidence and multiplying that by the total incidence rate in Kent County or Michigan. That calculation is shown in Figure 2-3.

**Figure 2-3.
Economic Impact by Health Condition**

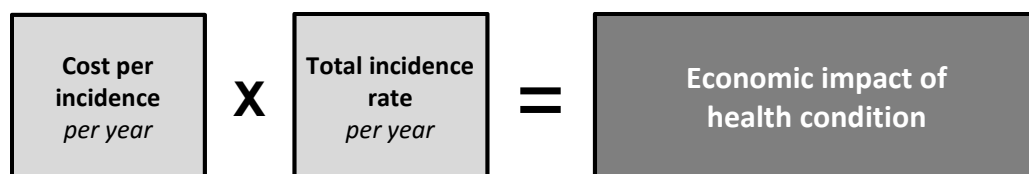


Figure 2-4 shows the total yearly economic impact by health condition to Michigan.

Figure 2-4.
Michigan: Total Yearly Economic Impact by Health Condition

Note: Costs are average per year for Michigan.

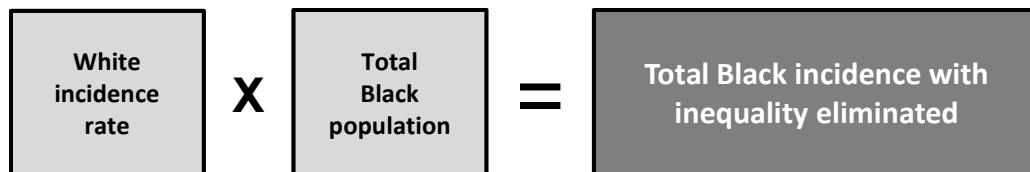
Source:
 Analysis by BBC Research & Consulting.

Health Condition	Economic Impact in MI
Obesity	\$15,961,000,000
Heart Disease	\$2,692,000,000
Stroke	\$2,448,000,000
Mental Health	\$2,429,000,000
Diabetes	\$2,212,000,000
Lung Cancer	\$131,000,000
Breast Cancer	\$69,000,000
Prostate Cancer	\$34,000,000
Teenage Pregnancy	\$6,000,000
Total	\$25,982,000,000

The calculation for HIV was calculated as a total lifetime cost, as opposed to the per year calculation of other conditions. For Michigan, the lifetime economic impact of HIV was over \$866 million.

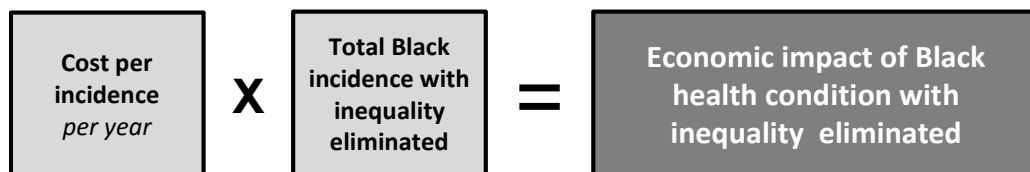
After calculating the economic impact associated with each health condition, the study team then used a three-step process to calculate the total cost of a health inequality. In step-one, the study team calculated a hypothetical incidence of the health condition among the Black population using the White incidence rate. This calculated was created to estimate the number of Blacks affected by a health condition with the health disparity eliminated. That calculation is shown in Figure 2-5.

Figure 2-5.
Hypothetical Black Incidence with Inequality Eliminated



For step-two, the study team used the hypothetical Black incidence calculated in step-one to calculate the economic impact by health condition of the Black population with inequality eliminated, as shown in Figure 2-6.

Figure 2-6.
Projected Economic Impact of Black Incidence of Health Condition with Inequality Eliminated



In step-three, BBC subtracted the cost with inequality removed calculated in step-two from the actual cost, as shown in Figure 2-7.

Figure 2-7.
Cost of Inequality

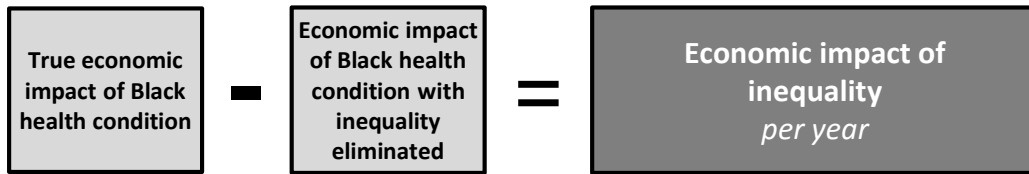


Figure 2-8 shows the number of Blacks that account for the inequality and the total economic impact associated with that inequality.

Figure 2-8.
Kent County: Total Health Inequalities by Health Condition

Note:

All amounts are yearly totals. All amounts were calculated at the most recent incidence rates available.

†Calculations were based off incidence and population rates for 2014.

*Calculations were based off incidence and population rate for 2012.

Source:

Analysis by BBC Research & Consulting.

Health Condition	Number of Blacks Affected	Inequality Economic Impact
Obesity	14,073	\$71,909,000 †
Stroke	2,985	\$20,467,000 †
Diabetes	7,392	\$20,458,000 †
Mental Health	6,112	\$12,478,000 †
Heart Disease	426	\$2,227,000 †
Lung Cancer	29	\$568,000 *
Teenage Pregnancy	56	\$95,000 †
Prostate Cancer	16	\$84,000 *
Total	31,089	\$128,286,000

Breast Cancer and HIV were analyzed at a state level. In 2013, the number of Blacks that make up the breast cancer inequality in Michigan are 132 and account for about \$749,000. In 2012, the HIV inequality accounted for 26 new infections and the total lifetime economic impact to Michigan of about \$20,673,000.

SECTION III.

Economic Impact of Health Conditions

Using the methodology outlined in Section II, BBC determined that the total economic impact of the inequalities of the 10 studied health conditions is more than \$100 million per year in Kent County. Section III provides details about the economic impact of each health condition. Infographics of the findings by health condition are provided in Appendix A.

Heart Disease

Heart disease is the leading cause of death for both men and women in the United States. About one in every four deaths is due to heart disease.² Figure 3-1 shows the death and incidence rates of coronary heart disease in Kent County, Michigan, and the United States in 2014.

Figure 3-1.
2014 Death and Incidence Rate of Coronary Heart Disease

Source:

GRAAHI's Health Equity Index. Grand Rapids African American Health Institute, 2016; 2014 Behavioral Risk Factor Survey. Kent County Health Department, 2015.

Heart Disease 2014	Kent County	Michigan	United States
Death Rate per 100,000	179.7	200.3	167.0
Incidence Rate	4.8%	5.2%	4.2%

Within Kent County, Blacks develop heart disease at a 12% higher rate than Whites.³ In 2014, that inequality accounted for 351 individuals with heart disease and a total economic impact of over \$1.8 million. Blacks in Kent County die of heart disease one and a half times more often than Whites.

There are several contributing health behaviors that can lead to heart disease. Those include cigarette smoking, diabetes, excess weight, poor nutrition, and physical inactivity. The American Heart Association estimates that for each dollar spent on community-based programs that promote and encourage increased physical activity, proper nutrition, and smoking prevention or cessation, \$5.60 is returned to the community through the reduction of direct and indirect costs.

Stroke

Stroke is the fourth leading cause of death in the United States and costs over \$30 billion each year.⁴ Figure 3-2 shows the death and incidence rates of stroke for Kent County, Michigan, and United States in 2014.

Figure 3-2.
2014 Death and Incidence Rate of Stroke

Source:

GRAAHI's Health Equity Index. Grand Rapids African American Health Institute, 2016; 2014 Behavioral Risk Factor Survey. Kent County Health Department, 2015.

Stroke 2014	Kent County	Michigan	United States
Death Rate per 100,000	28.9	37.8	36.5
Incidence Rate	4.4%	3.6%	2.8%

In Kent County, stroke costs the community over \$190 million per year.^{4,5} Blacks suffer from strokes twice as often as Whites and die of a stroke over one and half times more often.³ In 2014, the stroke incidence inequality in Kent County accounted for 2,463 Blacks and an economic impact of just under \$17 million.

Like heart disease, strokes can be prevented with proper nutrition, exercise, weight management, and smoking cessation. Smoking is a major contributor to increased risk for stroke. Programs focused on tobacco cessation, in addition to decreasing sedentary behaviors and increasing proper nutrition, can have significant benefits in preventing strokes.

Diabetes

In Michigan, over 10 percent of the population has been diagnosed with diabetes, and almost four times that amount has been diagnosed with pre-diabetes and is at risk for developing type 2 diabetes (37 %).⁶ Figure 3-3 shows the incidence rate of diabetes for Kent County, Michigan, and the United States in 2014.

Figure 3-3.
2014 Incidence Rate of Diabetes

Source:
2014 Behavioral Risk Factor Survey. Kent County Health Department, 2015.

Diabetes 2014	Kent County	Michigan	United States
Incidence Rate	9.2%	10.4%	9.6%

Within Kent County, there is a large inequality between Whites and Blacks living with diabetes. Blacks are more than twice as likely to have diabetes as Whites.³ In 2014, this inequality accounted for about 6,100 Blacks in Kent County with diabetes, and the economic impact was just under \$17 million per year.

To prevent or delay pre-diabetes from developing into type 2 diabetes, the Centers for Disease Control and Prevention (CDC) recommends exercise and proper nutrition for moderate weight loss.⁷ For those that have diabetes, the American Diabetes Association recommends that diabetics exercise regularly and maintain a healthy weight to help prevent further complications and illnesses.⁸ As a result, community-based programs that promote exercise and proper nutrition can help to prevent and delay diabetes among Kent County residents.

Obesity

Almost 70 percent of Americans are either overweight or obese.⁹ In Michigan, rates are similar: 35 percent are overweight, and 31 percent are obese.¹⁰ Figure 3-4 shows the incidence rate of obesity in Kent County, Michigan, and the United States in 2014.

Figure 3-4.
2014 Incidence Rate of Obesity

Source:
2014 Behavioral Risk Factor Survey. Kent County Health Department, 2015

Obesity 2014	Kent County	Michigan	United States
Incidence Rate	27.6%	31.5%	28.9%

In 2014, Blacks (46 %) were obese at a much higher rate than Whites (26 %) within Kent County, which resulted in 11,612 Blacks with obesity. The total yearly economic impact of the obesity inequality to Kent County is \$59 million.

Similar to heart disease, stroke, and diabetes, obesity can be prevented with proper nutrition, exercise, and weight management. Community-based programs that focus on promoting moderate exercise and a healthy diet have been shown to have a good return on investment, can improve the lives of Kent County residents, and can prevent the development of other chronic diseases caused by obesity.

Lung Cancer

Lung cancer is the most common form of cancer death in men and women. Incidence rates of lung cancer in women are second only to breast cancer. In men, lung cancer is second only to prostate cancer.¹¹ Figure 3-5 shows the death and incidence rates of lung cancer in Kent County, Michigan, and the United States in 2012.

Figure 3-5.
2012 Death and Incidence Rate of Lung Cancer

Source:

New Cases of Lung Cancer Michigan Department of Health & Human Services; United States Cancer Statistics, Centers for Disease Control and Prevention.

Lung Cancer 2012	Kent County	Michigan	United States
Death Rate per 100,000	38.4	48.2	43.4
Incidence Rate per 100,000	60	68	61

In 2012, Blacks were almost twice as likely to develop lung cancer as Whites in Kent County.¹² This inequality accounted for an additional 26 Blacks with lung cancer and a yearly economic impact of almost \$500,000.

Those that smoke are at a significantly higher risk of developing lung cancer; some estimates indicate 15 or 30 times more likely. Similar to heart disease and stroke, community-based programs that focus on smoking cessation have a good return on investment in terms of preventing lung cancer.

Breast Cancer

Even with extensive research and new treatments, breast cancer remains the most common new cancer diagnosis for women and the second leading cancer death among women in Michigan.¹³ Figure 3-6 shows the death and incidence rates of breast cancer in females in Kent County, Michigan, and the United States in 2013.

Figure 3-6.
2013 Death and Incidence Rate of Breast Cancer

Source:

GRAAHI's Health Equity Index. Grand Rapids African American Health Institute, 2016; United States Cancer Statistics, Centers for Disease Control and Prevention.

Breast Cancer 2013	Kent County	Michigan	United States
Death Rate per 100,000	19.8	22.2	20.7
Incidence Rate per 100,000	140.3	123.0	123.1

In Michigan, Black women are diagnosed and die of breast cancer more frequently than White women.¹⁴ This inequality accounts for 132 women in Michigan and a yearly economic impact of about \$750,000.

Although there are many factors that contribute to an individual developing breast cancer, it is known that a poor lifestyle that includes smoking, lack of exercise, and poor nutrition can contribute to many cancers. One study found that community-based programs that promote healthy lifestyles can help to reduce cancer rates by 2.5 percent and save the United States \$2.8 billion annually in health care costs.¹⁵

Prostate Cancer

Prostate cancer is the most common form of cancer in men and the second leading cause of cancer death for men, second only to lung cancer.¹¹ In 2012, prostate cancer in Michigan had an economic impact totaling over \$34 million. Figure 3-7 shows the death and incidence rates of prostate cancer in men for Kent County and Michigan in 2012.

Figure 3-7.
2012 Death and Incidence Rate of Prostate Cancer

Source:

GRAAHI's Health Equity Index. Grand Rapids African American Health Institute, 2016; United States Cancer Statistics, Centers for Disease Control and Prevention.

Prostate Cancer 2012	Kent County	Michigan
Death Rate per 100,000	18.6	19.0
Incidence Rate per 100,000	68.3	63.1

In 2012, Blacks in Kent County were diagnosed with prostate cancer at a higher rate than Whites and died one and half times more often.¹¹ This inequality accounted for 12 Blacks with prostate cancer and had a yearly economic impact of over \$64,000.

Much like breast cancer, there are many factors that contribute to the development of prostate cancer, but a healthy lifestyle is known to help reduce the risk. Community-based programs that promote healthy living can help to reduce the rates of prostate cancer.

Mental Health

Mental health can encompass many different types of mood disorders including depression, bipolarity, or schizophrenia. Because many people are undiagnosed with mental illness, the study team used data from the Michigan and Kent County Behavioral Risk Factor Surveillance System (BRFSS). The BRFSS collects information related to individuals' health behaviors, which can help to determine any health related risk factors. As part of the BRFSS, individuals are asked how many days within the last 30 they felt that they had poor mental health. For the purpose of this study, the incidence rate was determined by those individuals that self-reported 14 or more poor mental health days in the last month. Figure 3-8 shows the percentage of individuals that self-reported 14 or more poor mental health days in the last month for Kent County and Michigan in 2014.

Figure 3-8.
2014 Percentage of Individuals with 14 or More Poor Mental Health Days in Last Month

Source:

2014 Behavioral Risk Factor Survey. Kent County Health Department, 2015

Mental Health 2014	Kent County	Michigan
14+ poor mental health days in last month	7.9%	12.0%

In 2014, Blacks in Kent County reported 14 or more poor mental health days more than twice as often as than Whites.¹¹ That inequality accounted for over 6,100 individuals and a yearly economic impact of about \$12.5 million.

Mental illness is associated with increased risk for heart disease, stroke, diabetes, and obesity.¹⁶ Individuals that are depressed are more likely to smoke and less likely to quit smoking than those without depression.¹⁷ Therefore, it is not only important to screen for mental illness, but also to address healthy behaviors with individuals suffering from mental illness. It is especially important to address smoking habits in order to reduce the risk of developing other chronic disease or health conditions.

Teenage Pregnancy

Teenage pregnancy can put a great deal of emotional, financial, and societal strain on both the mother and the child. Research shows that a teenage mother is less likely to graduate high school and go to college, in turn earning less than if she would have waited to have children. The children of teen mothers have a greater possibility of incarceration; can have a higher risk for health problems; and daughters of teenage mothers are more likely to become teenage mothers themselves.¹⁸ Figure 3-9 shows the incidence rate of teenage pregnancy for Kent County, Michigan, and the United States in 2014.

Figure 3-9.
2014 Incidence Rate of Teenage Pregnancy

Teenage Pregnancy 2014	Kent County	Michigan	United States
Incidence Rate per 100,000	34.9	38.2	24.0

Source:

National Campaign to Prevent Unplanned and Teenage Pregnancy.

In 2014 within Kent County, Blacks and Hispanics had a much higher rate of teenage pregnancy than that of Whites; each at two and half times the rate of Whites.¹⁹ That inequality accounted for 52 births in Kent County and a yearly economic impact of almost \$87,000 for both mother and child. The indirect costs are associated with increased use of public programs such as Medicaid and CHIP and lost revenue due to decreased earning and spending.²⁰

Research shows that the most effective way to battle teenage pregnancy is to fund contraceptive services. For each dollar spent on publicly funded family planning services, more than \$7 is saved in direct and indirect costs.²¹ Each dollar spent on family planning services also saves \$5.68 in Medicaid services that would be needed for the mother and child.²²

HIV

It is estimated that over one million people in the United States are living with HIV but many may not know they are infected. Blacks are disproportionately infected with HIV. Contributing factors that increase risk for HIV infection include IV drug use, risky sexual behaviors, poverty, no access or limited access to quality healthcare, and place of residence. In the United States, Black males make up 12 percent of the population but account for 45 percent of new HIV diagnoses.²³ Figure 3-10 shows the incidence rate of new HIV infections for Kent County, Michigan, and the United States in 2012.

Figure 3-10.
2012 New HIV Infection Rate

Source:

Estimates of HIV Incidence Rates in Michigan, 2009-2013, Michigan Department of Health & Human Services; Health, United State, 2015 – Individual Charts and Tables, Centers for Disease Control and Prevention

HIV 2012	Kent County	Michigan	United States
Incidence Rate per 100,000	4.1	9.6	13.8

In 2013, Blacks were ten times more likely than Whites to be infected with HIV in Michigan.²⁴ (The rates by race for Kent County were not readily available.) That is the largest inequality of all health conditions studied in the economic impact study. That inequality accounts for 26 more infections per year and a total lifetime economic impact of more than \$20 million.

There are many effective community-based promotion programs that educate individuals, especially those at highest risk (Black men), on how to avoid infection. The CDC estimates that for each HIV infection that is prevented, there is a cost saving to the healthcare system of \$360,000.²⁵

SECTION IV.

Recommendations

BBC Research & Consulting (BBC) conducted the economic impact study to determine the impact of health inequalities among Blacks in Michigan and Kent County. As part of the study, BBC reviewed the literature and other data sources to:

1. Determine incidence rates of the studied health conditions among Blacks and Whites in Michigan and Kent County;
2. Determine the economic impact associated with each health condition; and
3. Calculate the cost of inequalities for Blacks that are affected with each studied health condition.

BBC's comprehensive literature review and analysis revealed important findings related to the economic impact of health inequalities in Michigan and Kent County. Key findings of the economic impact study include:

- Eight of the studied health conditions have inequalities that are associated with a total economic impact to Kent County of over \$128 million per year and affect over 31,000 Blacks;
- As the number one killer in the United States, Michigan, and Kent County, heart disease kills Blacks one and half times more often than Whites;
- Obesity makes up almost 60 percent of the total economic impact of the studied health conditions in Michigan and more than 50 percent of the total economic impact of inequalities in Kent County;
- Lung cancer is the second most common cancer in men and women and accounts for the highest economic impact per incidence of all the studied health conditions; and
- Blacks are 10 times more likely to become infected with HIV than Whites, and each new infection can have over \$900,000 in lifetime economic impact.

Eliminating health inequalities is critical for the benefit of the many individuals that are affected, as well as the community as a whole. This undertaking takes immense effort by communities, organizations, government agencies, community-members, and individuals. Many health organizations and agencies agree that nutrition, physical activity, and smoking have large implications on the health of individuals and are major contributors to chronic disease and other health conditions. Addressing those three health behaviors through community-based programs has shown to have a large return on investment. The American Heart Association states that every dollar spent on those types of programs returns \$5.60 to the community.

The Grand Rapids African American Health Institute (GAAHI) works to address the health and health inequalities of Blacks and other minority groups in Grand Rapids, Michigan, and Kent County. The organization uses a mix of education, advocacy, and research to address chronic diseases and other health conditions that affect Blacks at higher rates than Whites and other minorities. Currently, GAAHI administers different types of programs that address health inequalities. For example, GAAHI's *Real Women, Real Change* program empowers women to take care of their physical and mental health through nutrition, physical activity, and mental health resources. Another program, *Strong Fathers* is an initiative to provide fathers resources and support in playing an active role in their children's lives. In addition to its programs, GAAHI advocates for policies and systems that have positive impacts on health outcomes for Kent County residents. The research that GAAHI conducts helps to inform and empower community members with up-to-date health data and information. The largest form of these data exists in *GAAHI's Health Equity Index*. This website was developed to empower community members with information and data specific to Grand Rapids and Western Michigan. *GAAHI's Health Equity Index* provides data for 52 indicators in Kent County, Michigan. Data by race are available for 26 of those indicators.

GAAHI's mission is to positively impact the health of Blacks and other minorities in Grand Rapids and Kent County through their work. BBC believes that expanding programming similar to the *Real Women, Real Change* and *Strong Fathers* programs, in order to specifically target those health behaviors that directly contribute to chronic disease and other health conditions, can work to address health inequalities. Programs targeting Blacks of all genders and age groups that address nutrition, physical activity, and smoking can have a lasting impact on the health of Blacks in Kent County.

In addition to health behavior, advocating for policy and system changes that address larger institutional issues that contribute to health inequality is an integral part of addressing health inequalities. Poverty; lack of access to adequate health care; living in neighborhoods with limited access to healthy food options and exercise; and other social determinants of health all need to be addressed to get at the root of the health inequality. GAAHI should continue its work in advocacy and research around health inequalities in Kent County (such as *GAAHI's Health Equity Index*) and, if possible, should consider expanding to influence policy and system changes to help positively impact change. It is important to include community education around institutional problems that affect the health of Blacks and other minorities. Education improves the conversation and empowers individuals, organizations, and other community members to work towards health equality.

APPENDIX A.

Infographics

ECONOMIC IMPACT OF

HEALTH INEQUALITIES *in Michigan and Kent County*

THE PROBLEM



Health inequalities in Michigan and Kent County cost upwards of **\$100 million** every year.

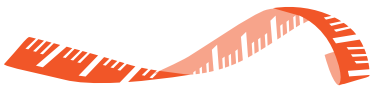
Medical costs

Lost workdays

Working while ill

An economic impact analysis was conducted to determine the societal and monetary impact of health inequalities for Blacks in Michigan and Kent County.

KEY FINDINGS



Obesity accounts for more than **50%** of health inequality costs.



Of all cancers, lung cancer has the highest average yearly per person cost at **\$19,500.**



Of the 10 health conditions studied, the highest rate of inequality for Blacks in Kent County is HIV at **10X the rate of whites.**

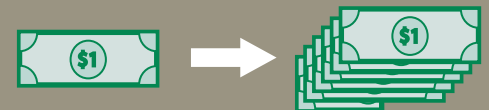
CALL TO ACTION

Three health behaviors are tied to almost all health conditions studied - sedentary lifestyle, poor nutrition, and smoking.



Addressing these three behaviors can help to reduce heart disease, stroke, cancer, obesity, and diabetes.

For every **\$1** spent on community-based programs that focus on improving physical activity, nutrition, and smoking prevention, **\$5.60** is returned to the community.

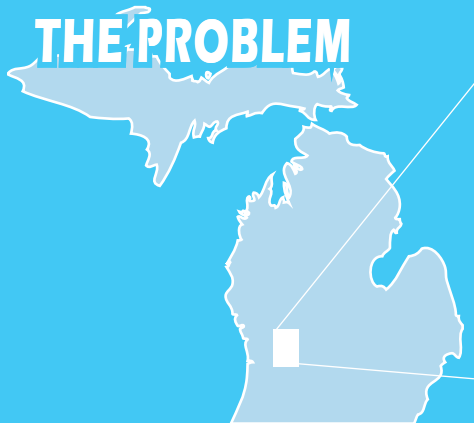


ECONOMIC IMPACT OF

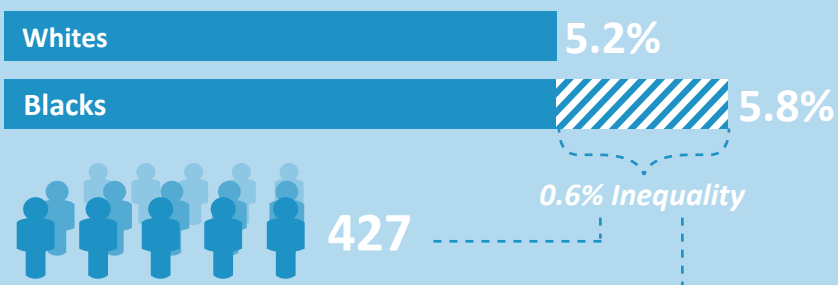
HEART DISEASE *in Kent County, Michigan*



THE PROBLEM

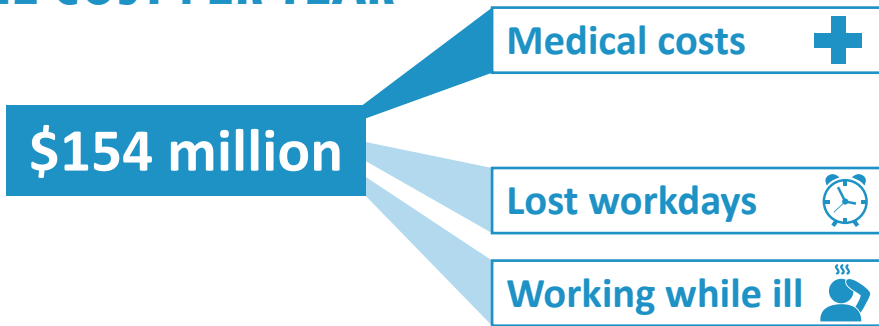


Kent County Incidence Rates



Blacks are
1.5X
more likely to
die of heart
disease

THE COST PER YEAR



CALL TO ACTION

Sedentary lifestyle, poor nutrition, and smoking all contribute to heart disease.



For every **\$1** spent on community-based programs that focus on improving physical activity, nutrition, and smoking prevention, **\$5.60** is returned to the community.

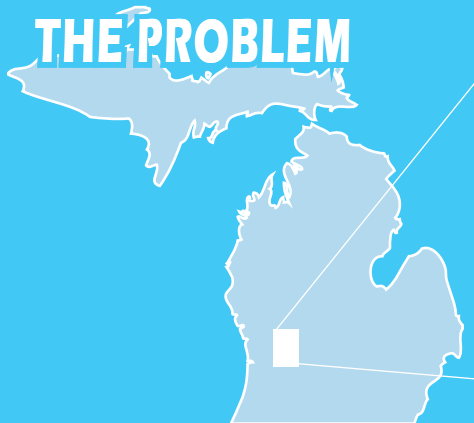


ECONOMIC IMPACT OF

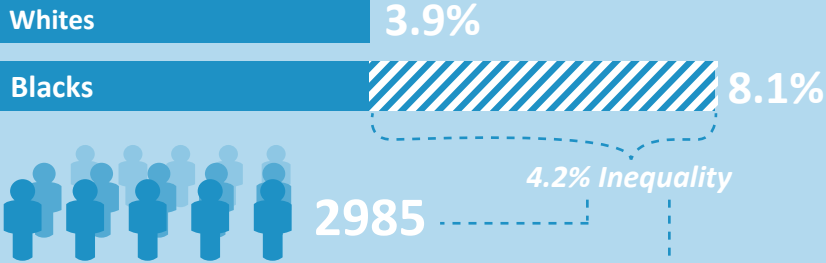
STROKE *in Kent County, Michigan*



THE PROBLEM

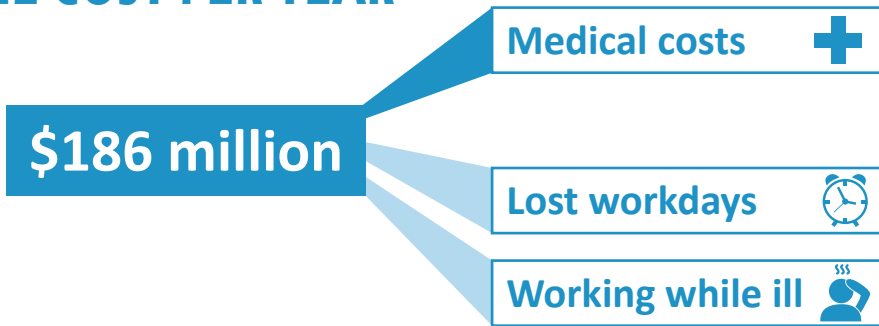


Kent County Incidence Rates



Blacks are over **1.5X** more likely to die of stroke

THE COST PER YEAR



CALL TO ACTION

Sedentary lifestyle, poor nutrition, and smoking all contribute to stroke.

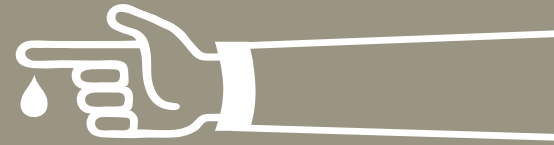


For every **\$1** spent on community-based programs that focus on improving physical activity, nutrition, and smoking prevention, **\$5.60** is returned to the community.

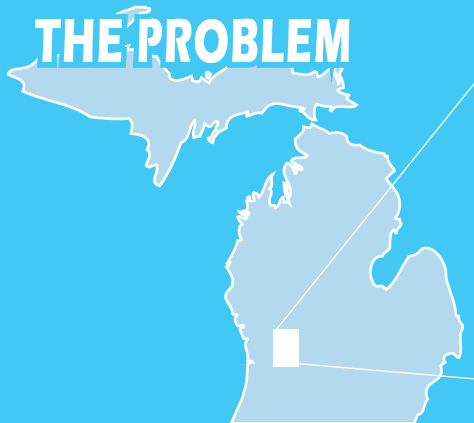


ECONOMIC IMPACT OF

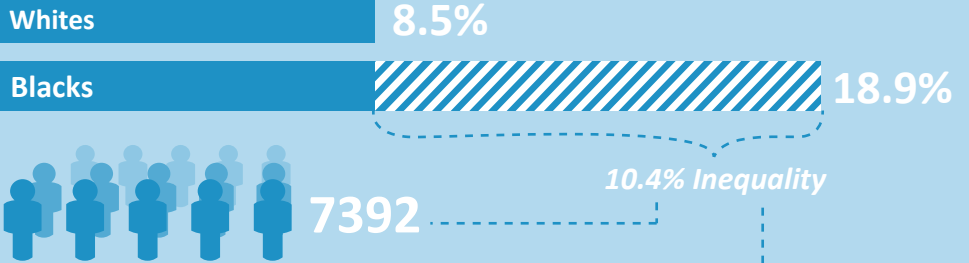
DIABETES *in Kent County, Michigan*



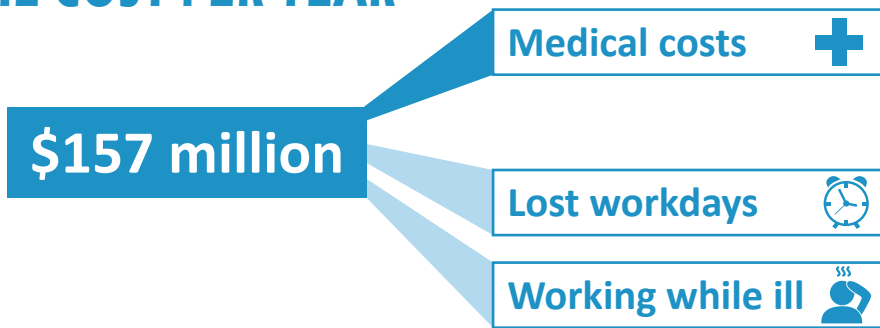
THE PROBLEM



Kent County Incidence Rates



THE COST PER YEAR



Eliminating inequality will
save Kent County



CALL TO ACTION

Sedentary lifestyle, poor nutrition, and smoking all contribute to diabetes.



For every **\$1** spent on community-based programs that focus on improving physical activity, nutrition, and smoking prevention, **\$5.60** is returned to the community.

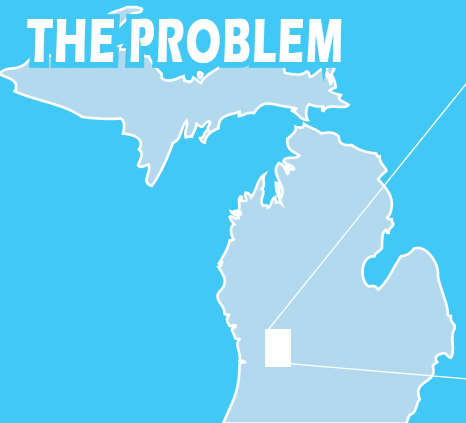


ECONOMIC IMPACT OF

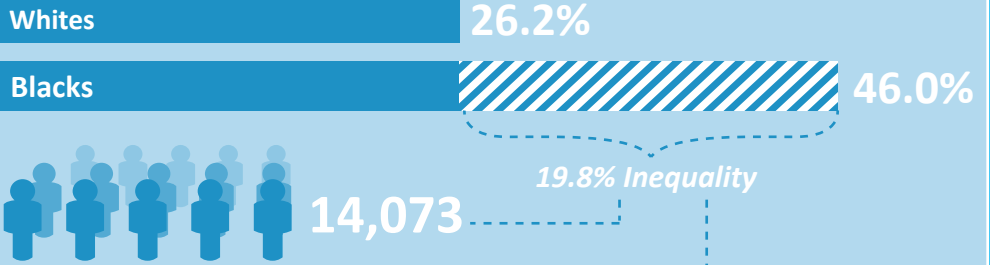
OBESITY *in Kent County, Michigan*



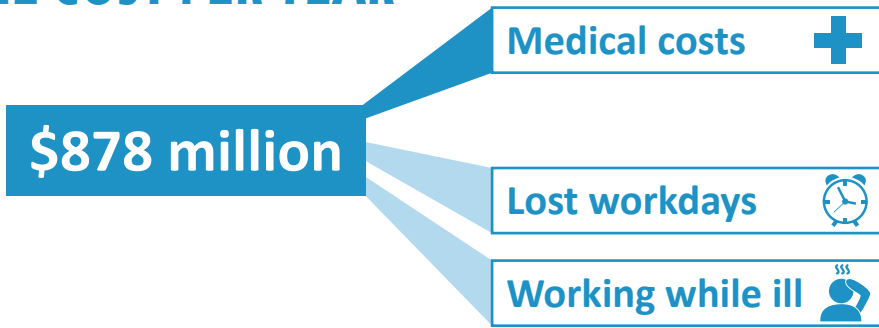
THE PROBLEM



Kent County Incidence Rates



THE COST PER YEAR



CALL TO ACTION

Sedentary lifestyle, poor nutrition, and smoking all contribute to obesity.

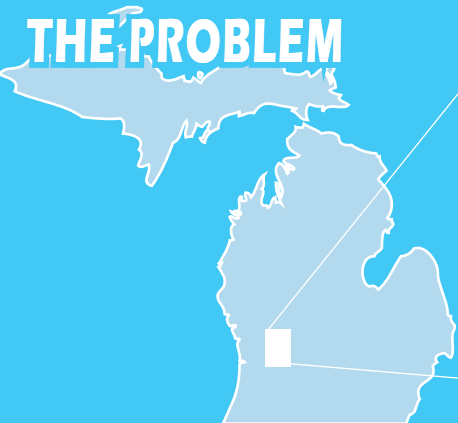


For every **\$1** spent on community-based programs that focus on improving physical activity, nutrition, and smoking prevention, **\$5.60** is returned to the community.

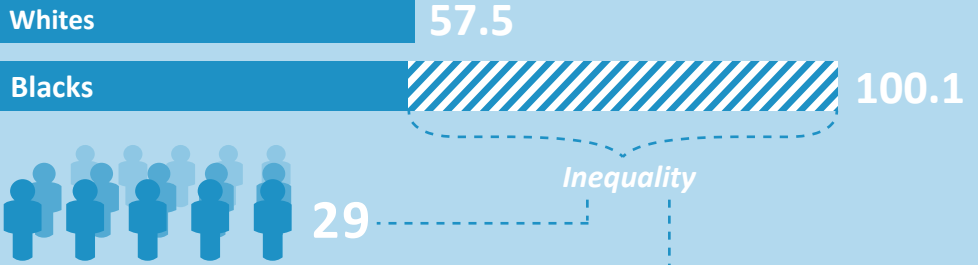


ECONOMIC IMPACT OF LUNG CANCER *in Kent County, Michigan*

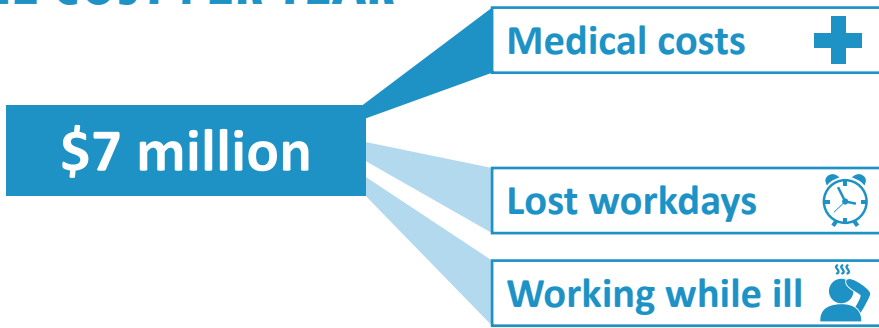
THE PROBLEM



Incidence per 100,000 Kent County Residents



THE COST PER YEAR



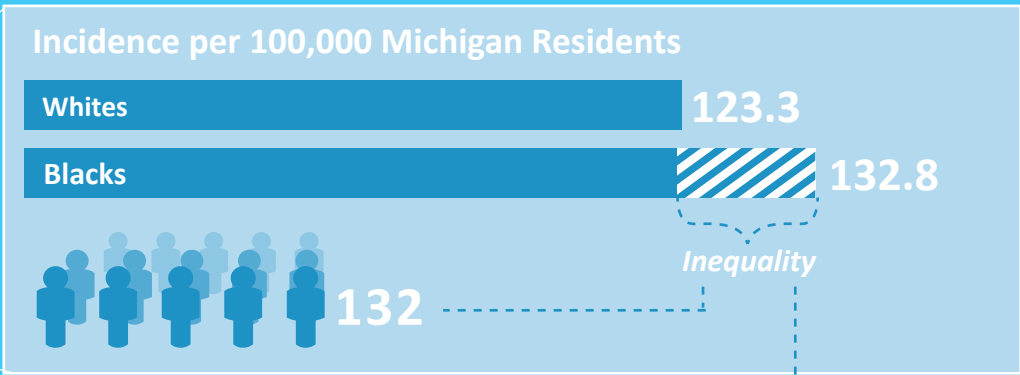
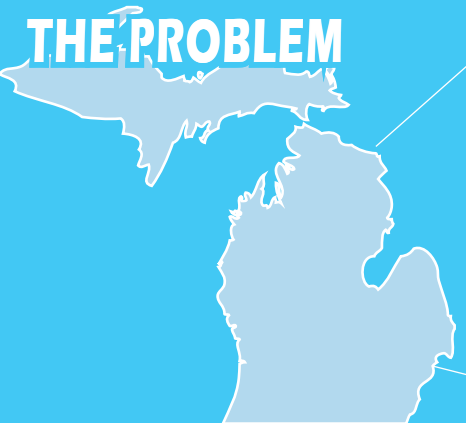
CALL TO ACTION



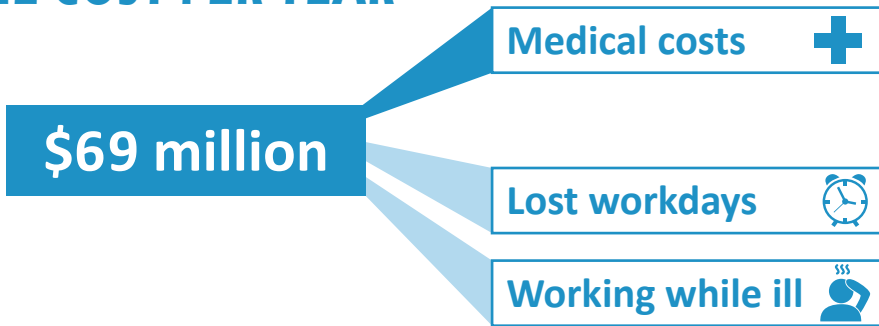
Evidence shows that community-based disease prevention programs cost under \$10 per person per year and can lead to improvements in physical activity, nutrition, and smoking cessation, which results in reductions of some forms of cancer, including lung cancer by **2.5%** and save over **\$2.8 billion** in health care costs per year.

ECONOMIC IMPACT OF BREAST CANCER *in Michigan*

THE PROBLEM



THE COST PER YEAR



CALL TO ACTION

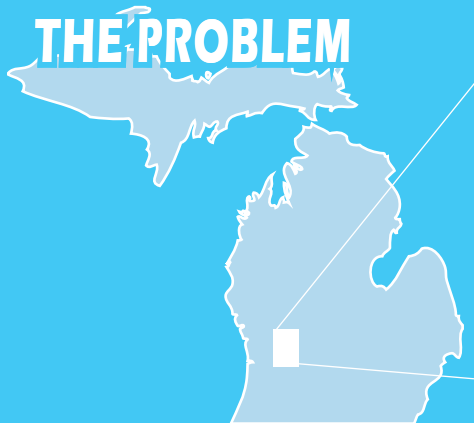


Evidence shows that community-based disease prevention programs cost under \$10 per person per year and can lead to improvements in physical activity, nutrition, and smoking cessation, which results in reductions of some forms of cancer, including breast cancer by **2.5%** and save over **\$2.8 billion** in health care costs per year.

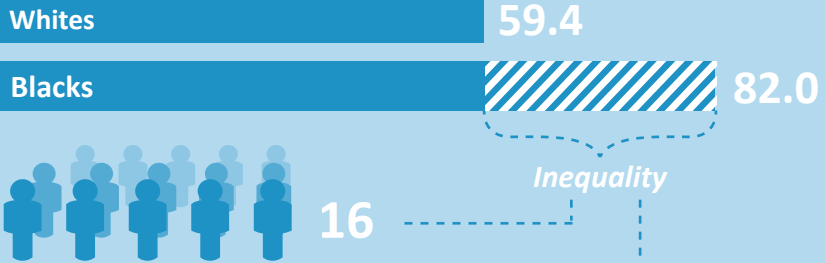
ECONOMIC IMPACT OF PROSTATE CANCER

in Kent County, Michigan

THE PROBLEM

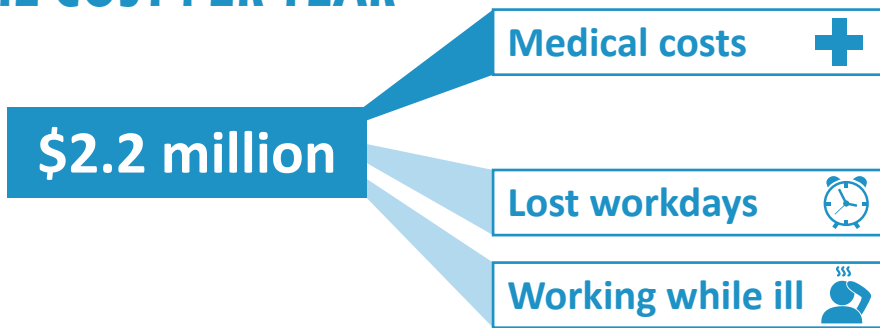


Incidence per 100,000 Kent County Residents



Blacks are **1.5X** more likely to die of prostate cancer

THE COST PER YEAR



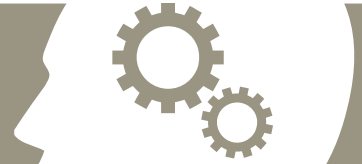
CALL TO ACTION



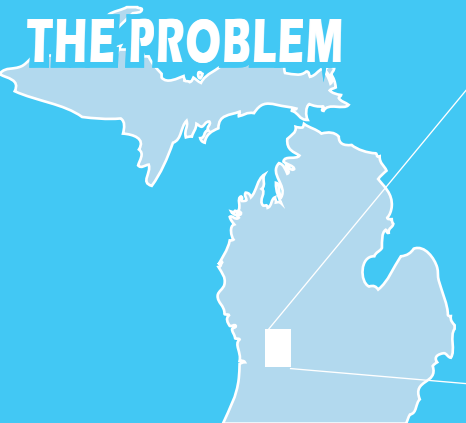
Evidence shows that community-based disease prevention programs cost under \$10 per person per year and can lead to improvements in physical activity, nutrition, and smoking cessation, which results in reductions of some forms of cancer, including prostate cancer by **2.5%** and save over **\$2.8 billion** in health care costs per year.

ECONOMIC IMPACT OF

MENTAL HEALTH* in Kent County, Michigan

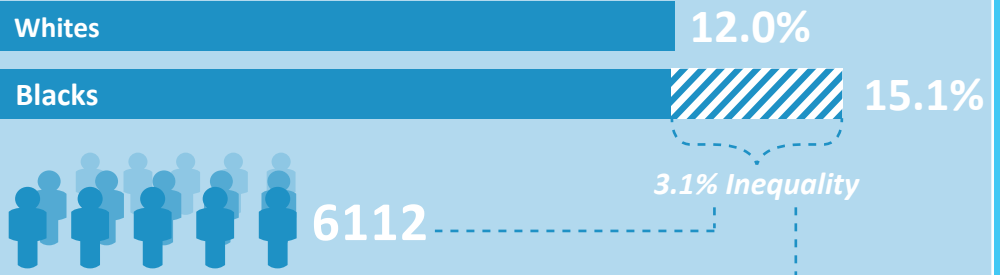


THE PROBLEM

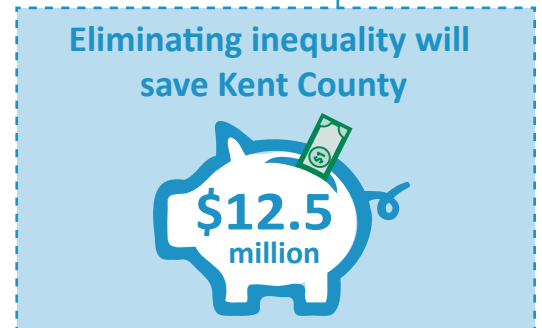
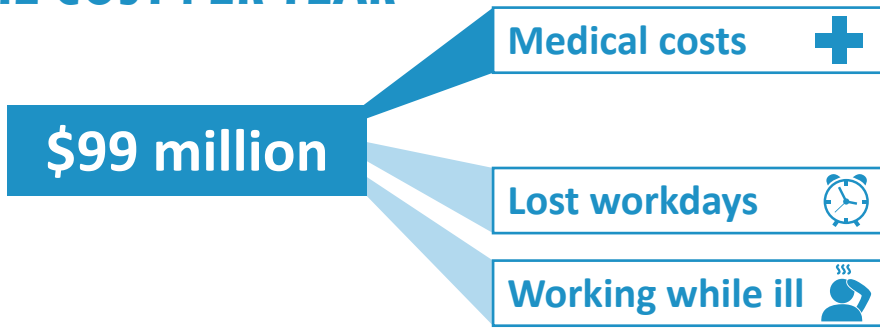


*Percentage of individuals that reported 14 or more poor mental health days in the past month

Kent County Incidence Rates



THE COST PER YEAR



CALL TO ACTION

The Substance Abuse and Mental Health Service Administration (SAMHSA) states that "every **\$1** spent on mental health programs results in **\$3-\$5** in new economic contributions and years of healthy life."



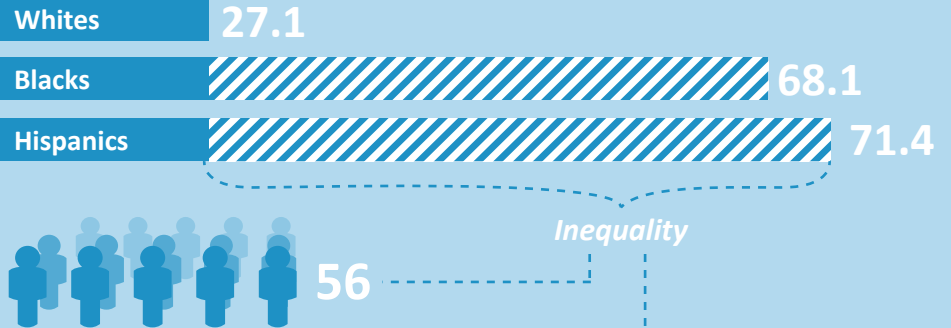
ECONOMIC IMPACT OF TEENAGE PREGNANCY *in Kent County, Michigan*



THE PROBLEM

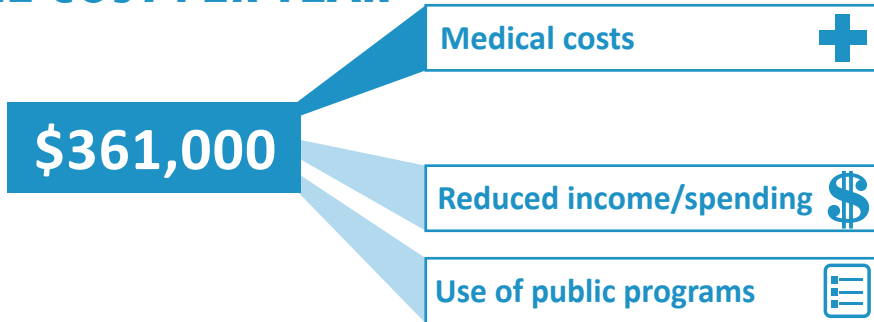


Incidence per 100,000 Kent County Residents*



*Rate includes live birth, abortion, or estimated miscarriage

THE COST PER YEAR



Eliminating inequality will
save Kent County



CALL TO ACTION

The Guttmacher Institute found that for every **\$1** of public funding that was put into contraceptive services resulted in **\$5.68** savings associated with unintended pregnancy and infant care.



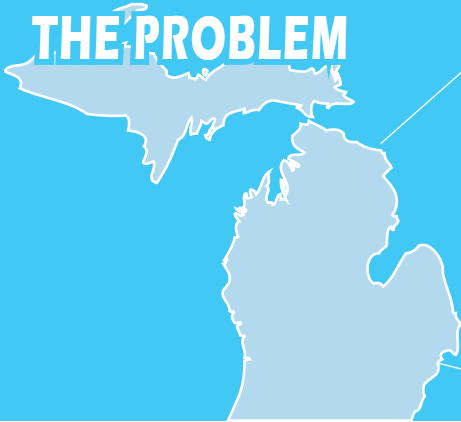
Another study by Frost, J.J., et al, found that helping women avoid unintended pregnancies with publicly funded family planning services saved **\$7.09** for every **\$1** spent.

ECONOMIC IMPACT OF

HIV in Michigan



THE PROBLEM



Incidence of new infection per 100,000 Michigan Residents

Whites 4

Blacks 42



Blacks are
10X
more likely to
test positive
for HIV

THE COST PER YEAR

\$864 million

Medical costs +

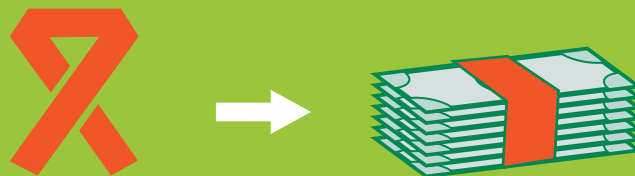
Lost workdays 🕒

Working while ill 🧑🏻

Eliminating inequality will
save Michigan



CALL TO ACTION



The Centers for Disease Control and Prevention estimates that for every one HIV infection that is prevented, there is a resulting **\$360,000** cost-saving to the health care system in providing lifetime HIV treatment.

APPENDIX B.

Bibliography

APPENDIX B.

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