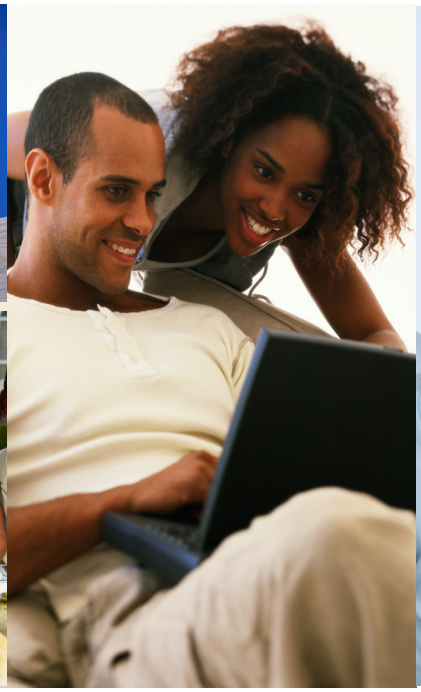
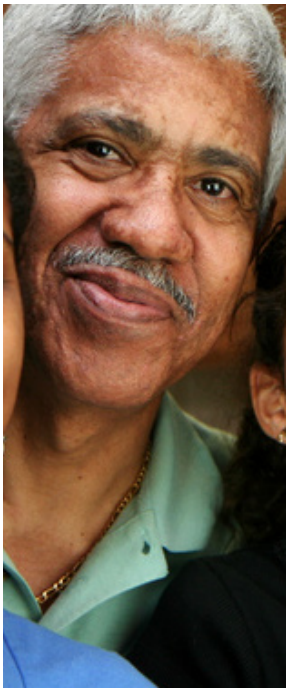
Unequal Health: The Black/White Gap in Franklin County







December 2010

Columbus Public Health
Healthier, Safer People

City of Columbus
Michael B. Coleman, Mayor

Office of Assessment & Surveillance

Acknowledgements

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OhioHealth

From the Health Commissioner

Health begins where we live, learn, work and play. But do we all have the same opportunities for good health?

December 31, 2010

Dear Public Health Partner:

The following report "Unequal Health: The Black/White Gap in Franklin County" provides a snapshot of some of the health differences that exist between non-Hispanic blacks and non-Hispanic whites in our community. As you will see from the data, blacks fare worse than whites for many health indicators.

Reducing and eliminating the health disparities described in this report won't be easy. Health is more than health care. Recent research has shown that not only do education, income, and living conditions affect health outcomes, but racism and discrimination impact health as well.

As you read this report, I ask you to move beyond your comfort zone and traditional role to find new opportunities to address the root causes of health disparities in our community and join our collective efforts. It will take all of us working together over the long term to give all residents the chance to live the healthy and safe lives they deserve.

Yours in good health,

Teresa C. Long, MD, MPH
Health Commissioner
Columbus Public Health

Health disparities are differences or inequalities in the burden of disease and/or health conditions, mortality, health status and access to care. In the United States, inequalities exist based on gender, age, race and/or ethnicity, sexual orientation, geography, and socio-economic position. One of the four overarching goals presented in Healthy People 2020, the nation's health agenda, is to acheive health equity, eliminate disparities, and improve the health of all groups

It is not in the scope of this report to address all of the health differences that exist in Franklin County. This report will focus on racial disparities, in particular the difference between non-Hispanic blacks and non-Hispanic whites. Throughout the report, non-Hispanic blacks will be referred to as black and non-Hispanic whites will be referred to as white. Health disparities cannot be measured for Hispanics/Latinos as the numbers are too small to make accurate comparisons; however, available data for Hispanics/Latinos are presented in a separate health brief.

This descriptive report will present the current state of health in Franklin County for the total population, for blacks, and for whites. A variety of data sources are used, including case reports for communicable disease and vital statistics for births and deaths. Data from the *2005/2006 Franklin County Community Health Risk Assessment* are used for health status and quality of life, chronic conditions, risk factors and health behaviors, access to care and the use of preventive services.

WHAT'S INSIDE

HOW TO MEASURE HEALTH DISPARITY

There are several ways to measure health disparity. **Disparity ratios** and **disproportionality** will be used in this report to compare the two largest racial groups living in Franklin County, blacks and whites. Research has shown that whites typically have better health outcomes, so they will be the reference group in this report.

The disparity ratio is calculated by dividing the rate/percent for the group of interest, in this report blacks, by the rate/percent for the reference group, in this case whites. For example, the age-adjusted death rate (ADR) for diabetes for blacks is 56.1 deaths per 100,000 population and for whites the ADR is 21.5 deaths per 100,000. The disparity ratio is 56.1/21.5 = 2.6. This means that blacks are 2.6 times more likely to die of diabetes as whites. Another way to phrase it is that blacks have a 260% increased risk of dying from diabetes compared to whites. A table showing data for blacks and whites and the disparity ratios will be presented for each section. The following legend will be used to interpret the disparity ratio:

- If the ratio is greater than one, then the prevalence or rate for blacks (numerator) is larger than it is for whites (denominator).
- If the ratio is less than one, then the prevalence or rate for blacks (numerator) is lower than it is for whites (denominator).

Disproportionality compares the actual distribution of disease to the distribution one would expect to see if it was "fair." In a "fair" distribution, the rate/percent would equal the group's proportion in the population. For example, for 2006-2008 blacks made up 20% of the population in Franklin County. If there was an equal distribution, blacks would make up approximately 20% of the deaths for each cause. This method of looking at health disparities/inequities is only used in this report with vital statistics data and communicable disease data.

Disparity Ratio (Black/White)*	Health Disparity Assessment
0.9 – 1.1	Little or no disparity
1.2 – 1.9 or 0.8-0.6	Disparity exists
2.0 or higher or 0.5 or lower	Large disparity exists

*See "Health Disparity Ratio" in the definitions for detailed description.

MORTALITY

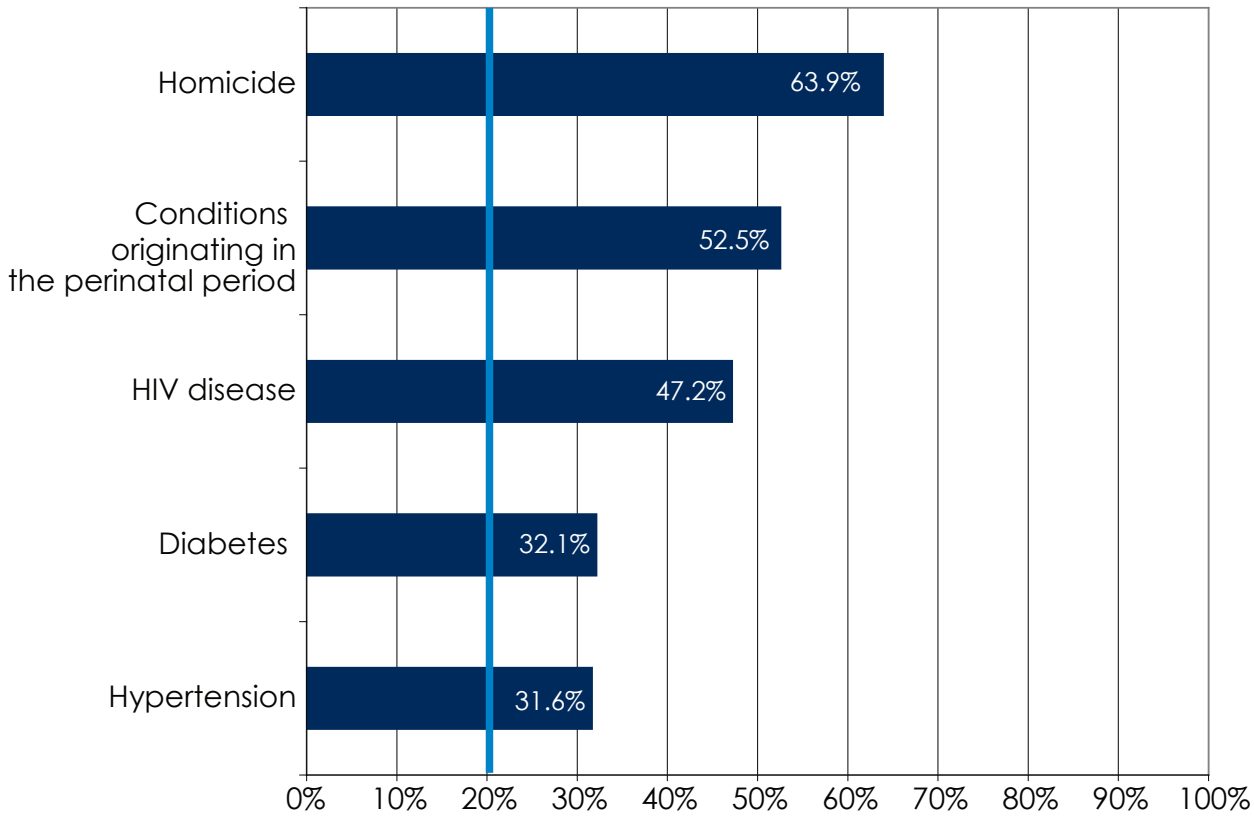
This section of the report presents information on deaths that occurred to residents of Franklin County during the years 2006-2008. These years were combined to allow for comparisons between racial/ethnic groups for selected causes of death. There were 24,801 deaths between 2006-2008 and an annual average of 8,267 deaths. For most causes of death, black mortality rates are higher than white mortality rates. However, white mortality rates are higher than black mortalty rates for chronic lower respiratory disease, Parkinson's disease and suicide.

Table 1

Cause of Death	Franklin County ADR[1]	Non-Hispanic Black ADR[1]	Non-Hispanic White ADR[1]	Disparity Ratio	Health Disparity Assessment
ALL	871.4	1076.3	847.6	1.3	Disparity Exists
Accidents	40.5	43.5	40.7	1.1	Little or No Disparity
Alzheimer's Disease	25.9	24.1	26.7	0.9	Little or No Disparity*
Cancer (all)	196.6	237.2	194.1	1.2	Disparity Exists
Chronic Liver Disease and Cirrhosis	10.1	12.0	10.1	1.2	Disparity Exists
Chronic Lower Respiratory Disease (CLRD)	54.5	42.4	58.0	0.7	Disparity Exists*
Conditions Originating in the Perinatal Period	6.6	13.7	4.4	3.1	Large Disparity Exists
Diabetes	26.4	56.1	21.5	2.6	Large Disparity Exists
Heart Disease	200.1	238.4	197.3	1.2	Disparity Exists
HIV disease	4.2	10.9	2.8	3.9	Large Disparity Exists
Homicide	8.7	27.5	3.6	7.6	Large Disparity Exists
Hypertension	10.1	22.0	8.1	2.7	Large Disparity Exists
Influenza and Pneumonia	19.0	22.8	18.7	1.2	Disparity Exists
Kidney Disease	17.0	30.6	14.7	2.1	Large Disparity Exists
Parkinson's Disease	9.0	3.5	10.0	0.4	Large Disparity Exists*
Septicemia	11.3	21.3	9.6	2.2	Large Disparity Exists
Stroke	47.3	66.7	43.7	1.5	Disparity Exists
Suicide	12.4	7.3	14.2	0.5	Large Disparity Exists*

Source: Ohio Vital Statistics Reporting System, Analyzed by Columbus Public Health
Notes:
***** White mortality rates are higher than black mortality rates.
1. Age-Adjusted Death Rate: the number of deaths per 100,000 population

Figure 1
Disproportionality by Cause of Death
Blacks are 20% of the population in Franklin County, yet they represent...



Source: Ohio Vital Statistics Reporting System, Analyzed by Columbus Public Health

Blacks are 20% of the Franklin County population. If there was an equal and fair distribution of disease, blacks would represent 20% of the deaths for each cause.

MATERNAL AND CHILD HEALTH

There were 54,861 births among residents of Franklin County from 2006-2008 with an annual average of 18,287 births. There were 476 deaths to infants under the age of one, making the infant mortality rate (IMR) 8.7 deaths per 1,000 live births. **If the infant mortality rate for black infants was the same as for white infants, there would have been 158 fewer deaths to black infants for 2006-2008.**

Preterm birth/low birth weight is the leading cause of death for infants in Franklin County. Infants who are born preterm or at a low birth weight not only have a greater risk of dying, but have an increased risk for complications, infection, neurological, respiratory and gastrointestinal problems, as well as other long term health and developmental problems.

Births to females under the age of 20 are also of concern. Infants born to teen mothers are more likely to be born preterm and/or have a low birth weight. In addition, teen mothers are less likely to finish high school or college and are, therefore, less likely to have adequate economic resources.

Timely prenatal care (starting in the first 3 months of pregnancy) impacts health outcomes for mother and baby. Early care provides risk assessment and intervention for medical and psychological conditions, as well as health education that can decrease the incidence of illness or death in both the mother and baby.

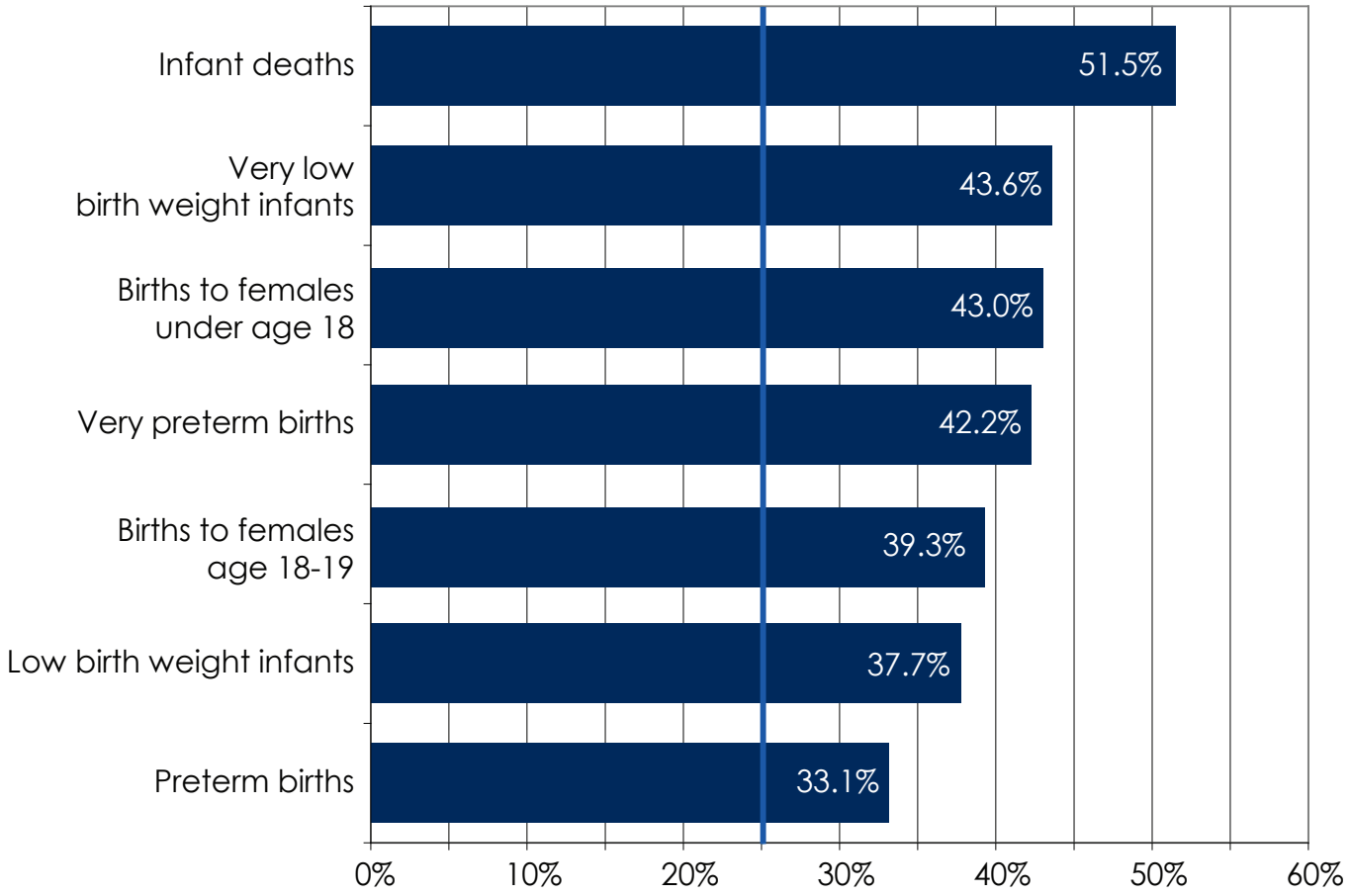
Table 2

Maternal and Child Health Indicator	Franklin County	Non-Hispanic Black	Non-Hispanic White	Disparity Ratio	Health Disparity Assessment
Infant Mortality Rate[1]	8.7	17.3	6.1	2.8	Large disparity exists
Preterm	13.4%	17.2%	12.0%	1.4	Disparity exists
Very Preterm	2.5%	4.1%	1.9%	2.2	Large disparity exists
Low Birth Weight	9.6%	14.0%	7.9%	1.8	Disparity exists
Very Low Birth Weight	1.9%	3.2%	1.4%	2.3	Large disparity exists
Mother age 17 and younger	3.3%	5.4%	2.2%	2.5	Large disparity exists
Mother age 18-19	6.9%	10.5%	5.5%	1.9	Disparity exists
Late Prenatal Care (Month 4 or later)[2]	10.0%	18.0%	7.4%	2.4	Large disparity exists
No Prenatal Care	1.3%	2.2%	0.9%	2.4	Large disparity exists

Source: Ohio Vital Statistics Reporting System, Analyzed by Columbus Public Health

Notes:
1. Infant Mortality Rate (IMR): the number of deaths to infants under 1 year of age (364 days and younger) per 1,000 live births.
2. Prenatal care data are for 2003-2005. For 2006-2008, 38.7% of birth certificates are missing prenatal information calling the validity into question. See Prenatal Care (Details) for complete information.

Figure 2
Disproportionality by Maternal and Infant Health Indicators
26% of births for 2006-2008 are to black mothers, yet they represent...



Source: Ohio Vital Statistics Reporting System, Analyzed by Columbus Public Health

Blacks carry a disproportionate burden of poor birth outcomes. For 2006-2008, 26% of births were to black mothers. If birth outcomes were "fairly" distributed, then blacks would make up 26% of each indicator.

COMMUNICABLE DISEASE

Human Immunodeficiency Virus (HIV) and Sexually Transmitted Diseases

HIV is the virus that causes Acquired Immune Deficiency Syndrome (AIDS). The virus is transmitted from an infected person via bodily fluids, such as blood, breast milk or sexual fluids. Currently there is no cure, although with early detection and treatment, people with HIV are living longer.

Syphilis, chlamydia and gonorrhea are three significant reportable diseases transmitted through sexual contact. All three are bacterial infections that can be treated with antibiotics. However, if they are left untreated, they can lead to complications such as infertility, and in the case of syphilis, the disease may subsequently damage the internal organs, bones, and joints and can ultimately lead to death.

Nationally, the prevalence of sexually transmitted diseases is high among the black population, meaning blacks are more likely to have an infected partner. As a result, blacks can acquire infections from both high- and low-risk behaviors. According to the Guttmacher Institute, high prevalence of STDs can be a "symptom of other problems such as a lack of access to health care, poverty, unemployment, and other persistent social and economic discrimination." (1)

Tuberculosis

Tuberculosis (TB) is an airborne bacterial infection that usually attacks the lungs, but can affect any part of the body. If left untreated it can be fatal. Tuberculosis is an important public health concern in Franklin County. The 2006-2008 county incidence rate (6.6 cases per 100,000) is much higher than Ohio's (2.0) and is higher than any of the other metro counties in Ohio. This is in part due to the relatively high number of immigrants who have come to live here from areas of the world in which TB infection is endemic (more than 50% of all new cases are among the foreign-born population). However, even among the US-born cases, more than half are black.

Table 3

Communicable Disease Indicator	Franklin County[1]	Non-Hispanic Black[1]	Non-Hispanic White[1]	Disparity Ratio	Health Disparity Assessment
Living with HIV/AIDS [2]	274.0	506.9	219.5	2.3	Large disparity exists
HIV Incidence [3]	18.2	42.3	12.1	3.5	Large disparity exists
Syphilis Incidence [3]	8.9	15.2	6.9	2.2	Large disparity exists
Chlamydia Incidence [3,4]	564.0	1342.5	143.6	9.3	Large disparity exists
Gonorrhea Incidence [3,4]	315.1	960.7	67.3	14.3	Large disparity exists
Tuberculosis Incidence[3,5]	6.6	21.0	1.2	16.9	Large disparity exists

Source: Ohio Department of Health (HIV/AIDS Surveillance Program, STD Surveillance and Tuberculosis Registry)
Notes:
1. Cases per 100,000 population
2. "Living with HIV/AIDS" (prevalence) represents all persons ever diagnosed and reported with HIV or AIDS who have not been reported as having died as of Dec. 31, 2007. Data reported through Dec. 31, 2008.
3. New cases diagnosed each year (all data for 2006-2008, except for HIV incidence which is for 2005-2007).
4. Chlamydia and Gonorrhea rates are for all blacks and all whites (regardless of Hispanic ethnicity).
5. Tuberculosis Incidence is among all Franklin County residents (U.S. and foreign born).

1. Guttmacher Institute [internet]. In Brief: Facts on Sexually Transmitted Infections in the United States. June 2009. Available from: http://www.guttmacher.org/pubs/2009/06/09/FIB_STI_US.pdf

2005/2006 FRANKLIN COUNTY COMMUNITY HEALTH RISK ASSESSMENT

The *2005/2006 Franklin County Community Health Risk Assessment* is a telephone survey performed in conjunction with the Ohio Department of Health's Behavioral Risk Factor Surveillance System during 2005 and 2006. The assessment provides information on health status, prevalence of health behaviors and conditions linked to the leading causes of death, as well as access to care and the use of preventive services. These data typically do not change from year to year. The 2005/2006 data represents the most recent data for which there is an adequate sample size to compare whites and blacks in Franklin County. It is important to note that the following data are for adults age 18 and older and do not include adults who are institutionalized or do not have a telephone.

Health Status and Quality of Life

Health status and quality of life information provide an overall measure of well being. Self-reported health status is a powerful predictor of mortality and morbidity.[1] Measures of recent physical symptoms, mental and emotional distress, and disability show the burden of acute and chronic illness and future use of the health care system. For each of these measures blacks fare worse than their white counterparts.

Table 4

Health Status & Quality of Life Indicators (Age 18+)	Franklin County	Non-Hispanic Black	Non-Hispanic White	Disparity Ratio	Health Disparity Assessment
Self-rated fair or poor health	11.6%	18.0%	10.4%	1.7	Disparity exists
14 or more days of poor physical health (past 30 days)	9.4%	14.1%	8.7%	1.6	Disparity exists
14 or more days of poor mental health (past 30 days)	9.2%	14.1%	7.9%	1.8	Disparity exists
Disability Indicator					
14 or more activity-limited days (past 30 days)	5.0%	6.1	4.9%	1.2	Disparity exists

Source: *2005/2006 Franklin County Community Health Risk Assessment*, Columbus Public Health

1. Idler EL, Benyamini Y; Self-rated health and mortality: a review of twenty-seven community studies. *Journal of Health and Social Behavior*; 1997 Mar; 38(1):21-37.

Chronic Health Conditions

Chronic health conditions impair quality of life (as seen above) and can lead to premature death. For 2006-2008, 68% of all deaths in Franklin County were due to chronic diseases. According to the Centers for Disease Control and Prevention, medical care costs of people with chronic diseases account for more than 75% of total medical care costs in the United States.[1] In 2005, almost half of all Americans lived with at least one chronic condition.[1] Significant racial disparities exist not only in chronic disease mortality (as seen in Table 1), but also in disease prevalence.

Table 5

Chronic Health Conditions (Age 18+)	Franklin County	Non-Hispanic Black	Non-Hispanic White	Disparity Ratio	Health Disparity Assessment
Current Asthma	8.0%	11.1%	7.0%	1.6	Disparity exists
Diabetes	7.3%	11.9%	6.3%	1.9	Disparity exists
High Blood Pressure	25.0%	32.9%	24.2%	1.4	Disparity exists
High Blood Cholesterol	35.2%	25.3%	37.5%	0.7	Disparity exists *
Coronary Heart Disease	3.4%	1.2%	4.1%	0.3	Large disparity exists *
Heart Attack	3.9%	2.3%	3.9%	0.6	Disparity exists *

Source: *2005/2006 Franklin County Community Health Risk Assessment*, Columbus Public Health
Notes: *The prevalence is higher among whites than blacks.

1. Centers for Disease Control and Prevention [internet]. Atlanta. Chronic Disease Overview; c2008-2009 [updated 2009 October 7; cited 2008 March 20]. Available from: http://www.cdc.gov/nccdphp/overview.htm

Risk Factors and Modifiable Behaviors

There are a small number of risk factors common to many of the leading causes of death in Franklin County. Smoking, overweight and obesity, alcohol misuse, poor diet, and physical inactivity are the most significant. A key strategy to improving health is to modify these risk factors.

According to the CDC, tobacco is the leading cause of preventable illness and death in the United States and obesity is the second leading cause. Alcohol is the most commonly used drug in the United States. Both excessive alcohol consumption on one occasion and the consistent high consumption of alcohol over time increase the risk of acute and chronic health issues and premature death. Proper nutrition and adequate exercise are two important behaviors that decrease the risk of many chronic diseases and help maintain a healthy weight.

The *2005/2006 Franklin County Community Health Risk Assessment* also asks about high risk behaviors. These behaviors are defined as using intravenous (IV) drugs, having a diagnosis of a sexually transmitted disease, having anal sex in the past year, or testing positive for HIV, the virus that causes AIDS.

Table 6

Risk Factors and Modifiable Behaviors (Age 18+)	Franklin County	Non-Hispanic Black	Non-Hispanic White	Disparity Ratio	Health Disparity Assessment
Do not Meet Leisure Time Physical Activity Recommendations	50.7%	55.1%	49.1%	1.1	Little or no disparity
Do not Eat 5 or More Servings of Fruits and/or Vegetables	76.2%	75.2%	77.0%	1.0	Little or no disparity
Currently Smoke	21.2%	25.3%	21.4%	1.2	Disparity exists
Obesity (Body Mass Index=30+)	23.3%	35.5%	21.1%	1.7	Disparity exists
Overweight (Body Mass Index=25+)	59.1%	68.7%	57.8%	1.2	Disparity exists
Chronic or Heavy Drinking	5.6%	6.2%	6.0%	1.0	Little or no disparity
Binge Drinking	16.5%	15.6%	17.9%	0.9	Little or no disparity*
One or more high risk activities in the past year (Age 18-64)	3.9%	8.8%	2.5%	3.5	Large disparity exists

Source: *2005/2006 Franklin County Community Health Risk Assessment*, Columbus Public Health
Notes: *The prevalence is higher among whites than blacks.

Access to Care and Use of Preventive Services

Access to care and use of preventive services are important to maintaining an individual's health. Those who do not have health insurance often do not have access to care and tend to have poorer health outcomes. The uninsured are disproportionately from lower income and/or black households. Not having health insurance and having to pay for health care out-of-pocket often means that preventive medical care is not sought or is delayed due to cost. Sometimes, this means a minor illness is not properly managed and turns into an acute one, or an illness that could have been prevented is contracted or develops.

Table 7

Access to Care & Use of Preventive Services (Age 18+)	Franklin County[1]	Non-Hispanic Black	Non-Hispanic White	Disparity Ratio	Health Disparity Assessment
Uninsured (Age 18-64)	12.5%	23.4%	7.5%	3.1	Large disparity exists
Unable to see doctor due to cost (past 12 months)	10.9%	18.0%	8.4%	2.1	Large disparity exists
Preventive Medical Services					
Have not had routine check-up (past 12 months)	33.9%	23.4%	34.7%	0.7	Disparity exists*
Never tested for HIV	63.2%	45.0%	67.7%	0.7	Disparity exists*
Vaccination: Never had pneumonia shot (age 65+)	34.8%	51.8%	31.0%	1.7	Disparity exists
Vaccination: Did not get flu shot in the past 12 months (Age 65+)	40.5%	46.7%	39.4%	1.2	Little or no disparity

Source: *2005/2006 Franklin County Community Health Risk Assessment*, Columbus Public Health
Notes:
*Whites fare worse than blacks for this indicator.

CONCLUSION

For many of the health indicators presented in this report, blacks fared worse than whites. The largest mortality disparities (disparity ratio=2+) exist for infant mortality, homicide, Human Immunodeficiency Virus (HIV), conditions originating in the perinatal period, diabetes, hypertension, and kidney disease. Rates for blacks were also at least twice as high as the rates for whites for birth before 32 weeks gestation, birth weight of less than 3 pounds 5 ounces, lack of health insurance, being unable to see the doctor in the past year due to cost, and engaging in a high risk behavior in the past year.

Blacks had better mortality rates than whites for chronic lower respiratory disease, Parkinson's disease, and suicide. Blacks also had lower rates of diagnosed coronary heart disease, heart attack, and high cholesterol. However, blacks had higher rates of stroke and heart disease mortality. This discrepancy could be due to differences in access to care or the quality of care received.

This report describes the disparities that currently exist in Franklin County between blacks and whites. There are many factors believed to contribute to these disparities. Biology tells us that humans are 99.9% the same, so how can health disparities exist by race? Studies have shown lower socioeconomic status (education, income, employment status, and living conditions) leads to poor health outcomes. The history of slavery and segregation in America has created a situation where blacks are disproportionately represented in low income neighborhoods with fewer educational and economic opportunities and less access to medical care.[1,2,3] These neighborhood effects/social determinants of health contribute to the disparities described here. However, other studies have shown that even when controlling for these factors, a disparity persists.

Recent research shows the effect of racism and discrimination on health outcomes. According to the Institute of Medicine report *Unequal Treatment: Confronting Racial and Ethnic Disparities in Healthcare,* "bias, prejudice, and stereotyping on the part of healthcare providers may contribute to differences in care." This bias may be unconscious or conscious on the part of the individual or institution. The report goes on to document how blacks sometimes receive different medical treatment than their white counterparts, leading to worse health outcomes. It is not just that racism can lead to different treatments and subsequently poorer health outcomes,[4,5] but the actual experience of racism itself has a negative effect on health.[6] Studies have shown that the stress of regularly encountering racism can lead to adverse health outcomes. Racism is known to impact preterm delivery[7,8,9,10], blood pressure,[11,12,13] and mental health outcomes[14] to name a few.

Reducing and ultimately eliminating racial health disparities is a complex undertaking. Much remains to be done, and public health cannot do it alone. All people deserve the same opportunity to be healthy and thrive.

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Appendices

Working to Close the Gap

How do we, as individual organizations and collectively as a community, begin to narrow the gaps described in this report and others that exist in our community? There is no simple answer to this question. Many current efforts focus "downstream" at the health outcome. While we must continue to work "downstream," this approach is not sufficient to address health disparities. Health is more than healthcare, and the conditions into which we are born, live, learn, work and play have a strong impact on our health and our ability to make healthy decisions.

These social, economic, and environmental conditions are called the social determinants of health. Some factors included under this umbrella are education, employment/working conditions, income, neighborhood, political power, racism/discrimination, and housing. It is important to note that all of these factors are intertwined.

Another concept needed to reduce health disparities is health equity. Healthy People 2020, the nation's health agenda, states, "Health equity is achieving the highest level of health for all people. Health equity entails focused societal efforts to address avoidable inequalities by equalizing the conditions for health for all groups, especially for those who have experienced socioeconomic disadvantage or historical injustices." This means working toward a fair and even distribution of the social determinants of health so there is equal opportunity for all people to be healthy. Unfortunately, achieving health equity will not result in equal health for all because individual choice and inherited genes lead to different health outcomes; however, health differences will be minimized. By using a social determinants framework and striving for health equity, we can improve the health of many individuals and have broad impacts on multiple health outcomes at once.

How do we move forward with our efforts to reduce or eliminate the health disparities described in this report? Many communities and health departments around the country are grappling with the same question. No one has the definitive answer, but the following recommendations are widely accepted as a good starting point. These recommendations come primarily from the World Health Organization and from the Prevention Institute.

What Organizations Can Do Internally

There are several ways in which an organization can begin to address the roots causes of health disparities internally.

1. **Assess the impact of all policies and programs on the social determinants of health including racism and discrimination.** Are we helping to close the gap or inadvertently contributing to its growth?
2. **Adopt a social determinants framework across all policy and program functions.**[1] See the World Health Organization's Social Determinants of Health Framework (See Appendix B).
3. **Build capacity by developing a workforce that is trained in the social determinants of health including racism and discrimination.**[1]
4. **Assure the standardized electronic collection and reporting of socioeconomic data including race and ethnicity by all programs.** This allows for monitoring disparities and evaluating programmatic efforts.
5. **Move beyond traditional roles.** Look for opportunities to partner with other organizations and sectors to address the root causes of health disparities (equalizing the social, economic, and environmental conditions in which we live, learn, work and play).

Policies and Actions to Support in the Community

Organizations, groups and individuals can work to affect change in Franklin County by supporting programs and policies that address the social determinants of health and strive for health equity.

The following are examples of what we can do as a community to improve the conditions in which we live, learn, work, and play. Closing the gaps in these areas will help to close the gaps in health reported earlier in this document. These recommendations are a starting point and are not comprehensive. Again, most were developed by the World Health Organization and the Prevention Institute. The details of how we move forward (priorities, tailored initiatives, etc.) requires a community process. Collaborative action has the best chance for bringing about change.

Overarching recommendations:

- Address race, racism, discrimination in institutions and policies, and socioeconomic segregation.[2]
- Raise awareness of the economic costs to all people in our society from health disparities. (The Joint Center for Political and Economic Studies report, The Economic Burden of Health Inequalities in the United States, found that racial inequalities cost the United States health care system over $50 billion per year.)
- Ensure that routine monitoring systems for health equity and the social determinants of health are in place locally. [1]
- Provide training on the social determinants of health to policy actors, stakeholders, and practitioners and invest in raising public awareness.1 Action cannot be taken until everyone recognizes the impacts these factors have and our obligation to improve them.
- Collaborate with multiple fields, diverse government agencies to ensure health, safety, health equity are considered in every relevant decision, action, and policy.[3]

Education:

- Invest in early childhood development. Provide high quality, affordable child care and preschools; ensure equitable distribution of and access to preschools; provide subsidies; invest in home-visiting initiatives and in child-care providers. [2]
- Expand access to higher education, technical and trade schools, and apprenticeships.
- Improve access to quality education and educational outcomes by reforming school funding to equalize access; investing in retaining teachers in disadvantaged schools; providing need-based supports, facilitating positive interventions for at-risk youth[2]; and identifying and addressing the barriers to girls and boys enrolling and staying in school. [1]

Income, Employment and Working Conditions:

- Achieving health equity requires safe, secure, and fairly paid work, year-round work opportunities, and healthy work–life balance for all.[1]
- Provide quality work for men and women with a living wage that takes into account the real and current cost of healthy living.[1]
- Improve the working conditions for all workers to reduce their exposure to material hazards, work related stress, and health-damaging behaviors. [1]

Access to Health Care:

- Institute culturally and linguistically appropriate screening, counseling, health care treatment for high-risk groups and for all, e.g., train providers; ensure effective communication, patient-system concordance for patient adherence, security, safety.[2]
- Monitor health care models/procedures for reducing inequities in health and data documenting racial and ethnic differences in care outcomes, e.g., standardize, coordinate, and disaggregate data; apply data practices that account for equitable health care. [2]
- Provide health care resources in the heart of the community, e.g., support community-based and school-based clinics; provide support groups for behavior change; promote community health workers; reform reimbursement; expand business hours. [2]
- Strengthen the diversity of the health care workforce, e.g., train clinical providers to conduct culturally appropriate outreach and services; offer incentives to work in underserved communities; diversify through community health workers. [2]
- Enhance quality of care; improve availability and affordability of critical prevention services, e.g., immunizations; growth monitoring; prevention assessment; safety behaviors; medical testing and screening; patient education; oral health care. [2]
- Language interpretation services should be provided for customers with limited English proficiency (LEP) receiving health services. Display notices informing limited English proficient customers of the availability of language assistance services.[3]
- Provide registration forms and customer marketing materials written at the 5th to 8th grade reading level according to the SMOG or Fry methods. [3]

Neighborhood, Housing, and the Built Environment:

- Improve safety, accessibility of public transportation, walking, bicycling by implementing high density, mixed-use zoning, transit-oriented development, interconnected streets strategies; adopt complete streets policies.[2]
- Encourage opportunities for physical activity from an early age to prevent chronic illnesses and promote physical and mental health by providing safe access to parks, open space, recreational facilities, and school recess. [2]
- Ensure urban planning promotes healthy and safe behaviors equitably, through investment in active transport, retail planning to manage access to unhealthy foods, and through good environmental design and regulatory controls, including control of the number of alcohol outlets. [1]
- Expand access to affordable fresh fruits and vegetables invest; in fresh food financing initiatives; incentivize neighborhood stores; promote acceptance of WIC benefits. [2]
- Increase housing quality, affordability, stability, proximity to resources, e.g., support transit-oriented, density, mixed-use, mixed-income development; ensure safe, healthful housing standards and materials; protect affordable housing, home ownership. [2]
- Perform Health Impact Assessments to evaluate the potential health effects of a project or policy before it is built or implemented. [5]
- Help families improve indoor air quality and reduce exposure to lead. [4]

The root causes of health disparities are deeply embedded in our society. Reducing health disparities in Franklin County will require long-term commitment not only from Columbus Public Health, but from agencies and community partners in a variety of other sectors including education, employment, housing, banking, city planning, private industry, social services, and from the residents themselves. We must be willing to look beyond traditional roles and explore innovative interdisciplinary programs and policies to ensure equal health for all.

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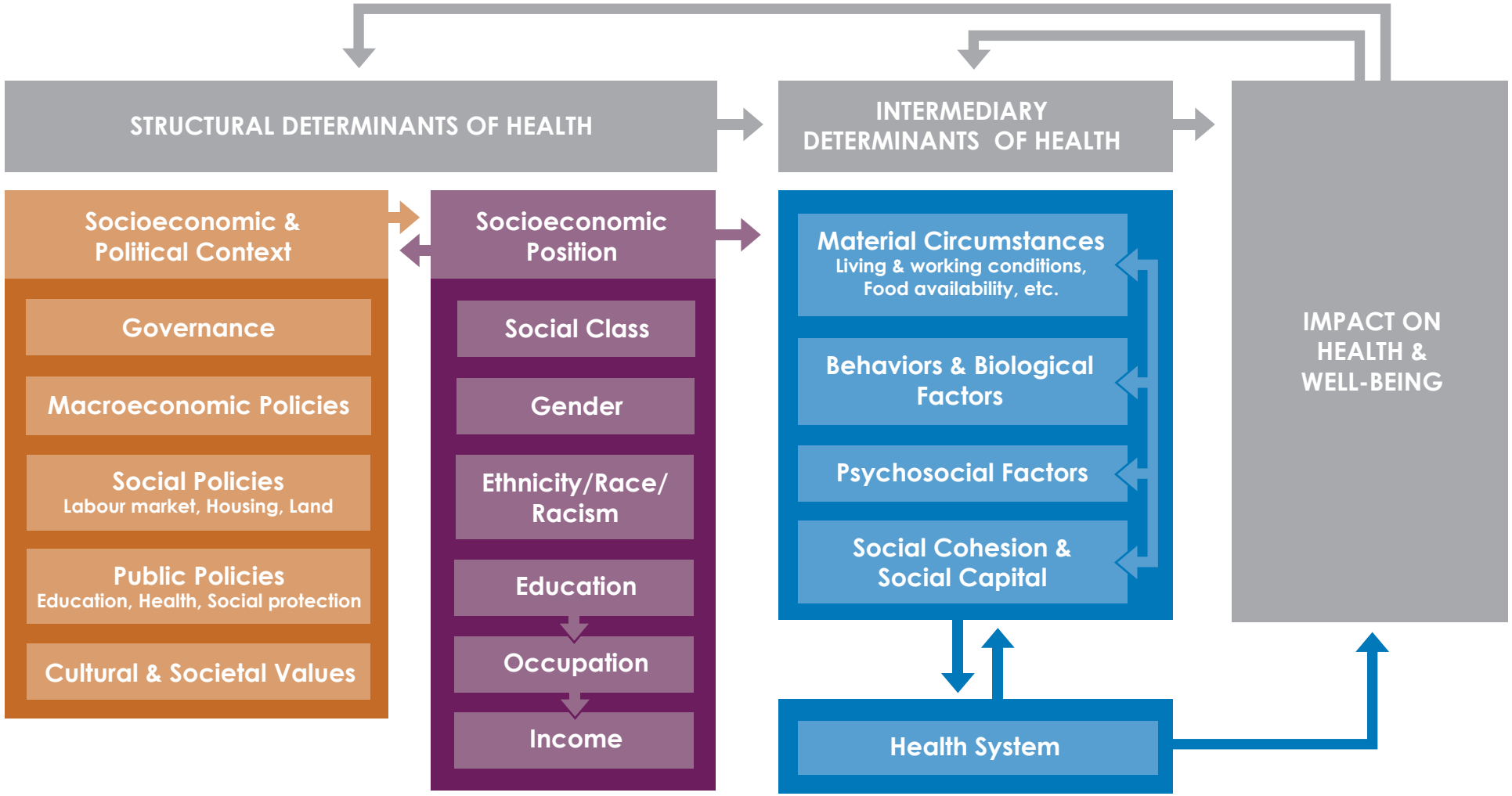
5. Centers for Disease Control and Prevention's Healthy Places Website: http://www.cdc.gov/healthyplaces/hia.htm.

SOCIAL DETERMINANTS OF HEALTH FRAMEWORK



Source: Amended from the World Health Organization's Commission on Social Determinants of Health- A Conceptual Framework for Action on the Social Determinants of Health; April 2007 Draft.

Social Determinants of Health and Health Equity Online Resources:

Courses:

World Health Organization's (WHO) online course on the social determinants of health (SDoH). This is a four module course, including an introduction to the social determinants of health and political strategies for action, a unit on the approaches for action on the SDoH, a unit on the policies and interventions to address the SDoH, and finally WHO recommendations on how to address the SDoH. Several of these are listed in this report's recommendations section.

http://dds-dispositivoglobal.ops.org.ar/curso/cursoeng/contexto.html

Alameda County public health training curriculum. Topics covered include: cultural competency; undoing racism; social and health equity; community capacity building; and public health history and core functions. More information is available on their website, particularly on the Social and Health Equity home page.
http://www.acphd.org/healthequity/training/index.htm

Prevention Institute's Health Equity and Prevention Primer. There are seven modules. Topics covered include: community factors and how they influence health equity; creating a framework to address health equity; enhancing community partnerships; the importance of local policy; and measurement and evaluation for health equity.
http://www.preventioninstitute.org/tools/focus-area-tools/health-equity-toolkit/hepp-test.html

Other Resources:

The **Virginian Department of Health's** health equity resource page links to numerous other sites on health disparities, achieving health equity and understanding the social determinants of health. This page is a good starting point for exploring what is available on the internet. http://www.vdh.virginia.gov/healthpolicy/healthequity/resources.htm

Boston Public Health Commission's Center for Health Equity and Social Justice provides valuable resources for working on health equity at the local level. http://www.bphc.org/programs/healthequitysocialjustice/Pages/Home.aspx

Unnatural Causes website developed to support the seven-part documentary series that explores the racial and socioeconomic inequalities in health. Video clips of the series are available, as well as other resources on health equity, educational opportunities, and an action center. http://www.unnaturalcauses.org/

PRENATAL CARE (Technical Note)

Timely prenatal care (starting in the first 3 months of pregnancy) impacts health outcomes for mother and baby. Early care provides risk assessment and intervention for medical and psychological conditions, as well as health education that can decrease the incidence of illness or death in both the mother and baby. Nationally, there are more black mothers who initiate prenatal care after the first trimester or receive no prenatal care. In Franklin County for 2006-2008, nearly 30% more white mothers entered prenatal care in the first trimester than black mothers. However, a large percentage of birth certificates are missing prenatal care information for 2006-2008 (2006 =41.8%, and 2007=38.2%, 2008=36.3%). The percentage of women who entered prenatal care in the first trimester is called into question due to the high proportion of missing. For this reason, prenatal care data for 2003-2005 is presented in this report. During this time period, only 11% of birth certificates were missing prenatal care information.

Prenatal Care Reporting Data Issues

Since 2006, prenatal care information is taken from the mother's actual medical record and is not comparable to previous years when prenatal care information was reported by the mother. For 2006 thru 2008, there is a data quality issue as over one-third (38.7%) of the records are missing prenatal care information (see table below).

The data for Franklin County also show a disparity in missing data. Birth certificates for black mothers are more likely to be missing prenatal care than birth certificates for white mothers (see table below).

Do the women for whom prenatal care information is missing follow a different pattern of prenatal care utilization than women for whom there are complete records? This is unknown, so one cannot rely on the known records to accurately describe the population of pregnant women in Franklin County.

Birth Certificates Missing Prenatal Care Information by Race, 2006-2008

	Franklin County		Non-Hispanic Black		Non-Hispanic White	
	Count	Percent	Count	Percent	Count	Percent
2008	6,704	36.3%	1,936	40.2%	3,544	32.5%
2007	6,936	38.2%	1,942	41.6%	3,729	34.5%
2006	7,614	41.8%	2,352	50.2%	4,037	36.7%

Definitions

Activity Limited Days:
These are the number of days in the past 30 days that a person's physical or mental health kept him or her from doing his or her usual activities such as self-care, work or recreation. This is a measure of disability.

Age-Adjusted Death Rate:
Age adjustment is a statistical technique that standardizes the age distribution of different populations so that they can be compared to each other. The rate is expressed as the number of deaths per 100,000 population.

Alcoholic Beverage:
One alcoholic beverage is defined as 1 bottle of beer, 1 glass of wine, 1 can or bottle of wine cooler, 1 cocktail or 1 shot of liquor.

Asthma:
Asthma is a chronic disease with symptoms that include tightness in the chest, shortness of breath, coughing, and wheezing (a whistling noise when one breathes). Asthma makes a person's airway (bronchial tubes) swollen and inflamed, which makes breathing difficult. There is no cure for asthma, but it is controllable.

Binge Drinking:
Binge drinking is drinking 5 or more alcoholic drinks on one occasion, one or more times in a month.

Body Mass Index (BMI):
Body mass index is a measure of overweight status that relates weight (in kilograms) to the square of height (in meters). Survey respondents were asked their current height and weight. The BMI was calculated by dividing the reported weight in kilograms by the square of the reported height in meters. Because the weight was collected in pounds and height in feet and inches, the following formula was used to convert to kilograms per meter squared: Weight (pounds) / Height (inches) squared x 703.
When interpreting data on overweight based on the BMI, it is important to remember that these data underestimate the true prevalence of overweight respondents, because of the tendency of most people to understate true weight in an interview. Also, individuals with a high proportion of muscle mass relative to their height may be classified as overweight when they are not truly overweight.

Underweight: BMI of less than 18.5 for adult females and males
Normal Weight: BMI of 18.5 – 24.9 for adult females and males
Overweight: BMI of 25 – 29.9 for adult females and males
Obese: BMI of 30 or greater for adult females and males

Cholesterol (Blood Cholesterol):
Cholesterol is a soft, waxy substance that is needed for key body functions. Humans make their own supplies of cholesterol in the liver. The body usually makes enough cholesterol for its needs, and any dietary cholesterol (from animal products) is considered excess.

Chronic Drinking or Heavy Drinking:
Chronic or heavy drinking is consuming an average of 2 or more alcoholic beverages per day for men. For women it is defined as consuming an average of more than 1 alcoholic drink per day.

Conditions Originating in Perinatal Period:
Conditions that have their origin in the perinatal period, week 28 of pregnancy through the first 28 days after birth, even though the death occurs later in life.

DEFINITIONS (CONTINUED)

Diabetes: Diabetes is a disorder of carbohydrate (glucose) metabolism in which the pancreas does not produce a sufficient amount of insulin, or the ability to use insulin is decreased. Insulin, produced by the pancreas, is necessary for glucose (sugar) to enter cells for conversion to energy, the synthesis of protein, and the storage of fat. In persons with diabetes, glucose and fat concentrate in the blood and result in damage to the vital organs. Severe long-term health complications that are associated with diabetes include limb amputation, renal failure, blindness, nerve damage, dental disease, and cardiovascular disease. Early detection of diabetes and proper disease management can control blood sugar levels and reduce, delay, or prevent the severe complications associated with diabetes. In this report, being diagnosed with diabetes does not include gestational diabetes.

Disparity Ratio: see health disparity ratio

Health Disparity: Health disparity is the difference or inequality in the burden of disease and/or health conditions, mortality, health outcomes and access to care between different segments of the population.

Health Disparity Ratio: A measure of health disparity. It examines the rate of one group relative to the rate of the comparison or reference group. The ratio is calculated by dividing the rate for the group of interest by the rate for the reference group. In this document the group of interest is non-Hispanic blacks and the reference group is non-Hispanic whites. If the ratio is greater than one, then the prevalence or rate for non-Hispanic blacks (numerator) is larger than it is for non-Hispanic whites (denominator). If the ratio is less than one, then the prevalence or rate for non-Hispanic blacks is lower than it is for non-Hispanic whites.

Health Equity: Fairness in the distribution of resources between groups with differing levels of social disadvantage; provides an environment where everyone has a good chance to be healthy.

Health Inequity: Differences in health status and death rates across populations groups that are systematic, avoidable, unfair and unjust. These differences are sustained over time and generations, and are beyond the control of individuals.

High Blood Cholesterol: Adults are considered as having high cholesterol if their health care professional has diagnosed them with high blood cholesterol. Blood cholesterol is measured as milligrams per deciliter (mg/dL) of blood. Usually a measurement of blood cholesterol includes total cholesterol, low density lipoprotein cholesterol (LDL) and high density lipoprotein cholesterol (HDL). Total blood cholesterol of over 200 mg/dL is considered high.

High Risk Behaviors: High risk situations are defined as using intravenous (IV) drugs, having a diagnosis of a sexually transmitted disease, having anal sex in the past year, or testing positive for HIV, the virus that causes AIDS.

Hypertension (High Blood Pressure): Hypertension is having been diagnosed with high blood pressure by a health professional on multiple occasions. Blood pressure is measured as millimeters mercury (mmHg). A blood pressure reading over 120/80 mmHg is considered above normal.

Incidence: Number of new cases of a disease or health condition occurring in a population at some designated time.

Infant Mortality Rate (IMR): A standardized measure of the yearly rate of death for infants under one year of age (364 days and younger). It is presented as the number of deaths per 1,000 live births.

DEFINITIONS (CONTINUED)

Low Birth Weight: Infant born weighing less than 2,500 grams or 5 pounds 8 ounces.

Physical Activity Recommendations (leisure time): At the time of this survey, adults met the recommendations if they reported engaging in moderate exercise for 30 or more minutes per day on 5 or more days per week or reported engaging in vigorous activity for 20 or more minutes per day on 3 or more days per week.

Poor Physical Health Days: These are the number of days in the past 30 days that a person's physical health was not good, such as suffering from illness or injury.

Poor Mental Health Days: These are the number of days in the past 30 days that a person's mental health was not good, such as suffering from stress, depression, or other emotional problems.

Preterm Birth: Infant born before 37 completed weeks gestation.

Prenatal Care: Prenatal care describes the health and supportive services provided to a woman while she is pregnant. The American College of Obstetricians and Gynecologists (ACOG) recommends early entry into prenatal care (during the first trimester). ACOG also recommends that pregnant women see their health professional at least once a month thru the seventh month of pregnancy, then every other week until 36 weeks, and weekly thereafter until delivery.

Prevalence: Number of existing cases of a disease or health condition in a population at some designated time.

Routine Medical Exam: A routine medical exam is a regular exam which enables a health care professional to assess the general health status of patients, to determine the need for screening tests and to counsel the patient regarding perceived issues that might affect the patient's health. To benefit the patient, medical exams should be performed, ideally, once a year. Routine medical exams are part of preventive medical care/services.

Social Determinants of Health: The conditions in which people are born, live, learn, work, play and age. Some examples of these economic, social and environmental conditions are income, food quality, schools, air quality, working conditions, housing, parks, discrimination, etc.

Smoker (Current): A smoker is someone who has smoked at least 100 cigarettes in his or her lifetime and who reports currently smoking every day or some days.

Uninsured: Uninsured is not having health care coverage at the time of the survey. This includes, but is not limited to, health insurance, prepaid health care plans, such as health maintenance organizations (HMO's), and governmental plans, such as Medicare. For this report, uninsured is measured for adults 18 to 64 since all adults age 65 and older are eligible for Medicare.

Vaccination: Vaccination is a well known public health measure to prevent communicable disease. Influenza and pneumonia are the 8th leading cause of death in Franklin County (2005-2007). Older adults are at the greatest risk for complications and death compared to younger adults. Receiving a seasonal flu and pneumonia vaccines are particularly important for adults age 65 and older.

Very Low Birth Weight: Infant born weighing less than 1,500 grams or 3 pounds 4 ounces.

Very Preterm Birth: Infant born before 32 completed weeks gestation.

A First look at Reactions to Race

As mentioned in the conclusion, recent studies suggest that the experience of racism contributes to a range of poor health outcomes. In 2002, Dr. Camara Jones [research director on social determinants of health at the Centers for Disease Control and Prevention (CDC)] and the CDC's Measures of Racism Working Group developed six questions for the Behavioral Risk Factor Surveillance System (BRFSS) to try to measure racism. The module, called Reactions to Race, includes questions about how often the respondent thinks about his or her race, whether they have been discriminated against at work or in a health care setting, and if the respondent had physical or emotional symptoms as a result of experiencing racism or discrimination.

Race is a social and not a biological construct; therefore, Dr. Jones uses two measures of race in her research: self-identified race (how you classify yourself) and socially-assigned race (how others classify you). She combines these two measures creating new categories such as "black-white" (self-identified black and socially-assigned white) and "black-black" (self-identified black and socially assigned black).

In 2004, Dr. Jones used these combined race categories to assess the impact of socially-assigned race on health status. She found that socially-assigned white was associated with excellent or very good health. She states that differences found by socially-assigned race are due to racism because a person who self-identifies as black, but is perceived by others as white will not face the same prejudice as someone who is perceived as black by others in our society.

Franklin County Findings

The Reactions to Race module was included on the 2005/2006 Franklin County Community Health Risk Assessment. Columbus Public Health analyzed the questions in the reactions to race module by socially-assigned race, because Dr. Jones' research has shown this is more significant than how a person classifies herself/himself.

Compared to adults who are socially-assigned white, more adults who are socially-assigned black report:

- having fair or poor health
- being treated worse than other races at work
- being treated worse than other races when seeking health care
- thinking about their race daily/constantly.

Experiencing racism or discrimination can affect both physical and mental health. Over half of adults who are socially-assigned black reported physical or emotional symptoms as a result of experiencing racism.

A complete report on Reactions to Race will be coming in 2011.