GRAND RAPIDS
African American
Health Institute

Real Reasons and Solutions to Reduce and Treat ***Hypertension*** Among African Americans in West Michigan

White Paper | April 2016
Grand Rapids African American Health Institute

Letter from GRAAHI's Clinical Director

The Grand Rapids African American Health Institute (GRAAHI) in Grand Rapids, Michigan focuses on improving health equity for African Americans and other high-need groups in West Michigan. GRAAHI strives to achieve this goal by implementing education, advocacy and research efforts at the grassroots and policy levels. Recently, GRAAHI focused its energies on a few health areas to maximize its impact in those areas. Those areas were—hypertension, infant mortality, diabetes, and healthy lifestyles. All of those areas negatively affect African Americans at greater rates than other demographic groups, thus GRAAHI seeks to educate and encourage the citizens of Grand Rapids to take charge of their health today.

This is GRAAHI's first white paper that focuses on hypertension and its debilitating impact on African Americans in Grand Rapids. Hypertension is clearly devastating, as it is the primary risk factor for heart disease and stroke, the first and second leading causes of death in the United States. In addition, it is called the silent killer, since it often shows no shows or symptoms of its presence. Concerning factors that may cause one's development of hypertension, genetics, unhealthy lifestyles, and stress are just a few of them. Moreover, living in poverty, being uninsured, and having poor access to healthy foods are other social determinants that can influence hypertension. On another note, many Americans are also prehypertension and will likely develop hypertension during their lifetime. With this in mind, everyone is encouraged to take hypertension and prehypertension seriously, so these illnesses cannot continue to ravage the lives of Americans.

The "Sperling's Hot Spots Report" ranked Grand Rapids as the 19th worst city for hypertension in the United States, so this white paper illuminates this critical issue for the citizens of Grand Rapids. This white paper also provides recommendations and solutions for hypertension at the individual, community and policy levels to combat this major public health problem. As with any resolution, it will require the efforts of many, including individuals, community health organizations, health care centers and the media, to help see our collective resolutions against hypertension reach their fruition. Overall, GRAAHI is hopeful that this white paper will raise awareness and spark actions to alleviate the real and serious threat of hypertension in Grand Rapids, Michigan.

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GRAAHI's Clinical Director

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Executive Summary

GRAAHI's Research Department prepared this white paper on hypertension to examine and discuss current research, data, strategies, programs and policies existing for hypertension in the United States (US). In addition, this white paper reviews and highlights disparities and inequities pertaining to hypertension and its associated outcomes, especially for Blacks and other high-need groups in the US. After reviewing this white paper, readers will have a better understanding of hypertension from the following aspects—clinical definitions, impact on the general population, impact on West Michigan/Kent County residents, impact on disparate population groups such as Blacks, current programs and policies, and proposed strategies at the community and policy levels to reduce the burden of hypertension in our society. Moreover, this comprehensive presentation of information on hypertension may inspire readers to conceive, suggest and/or develop additional strategies (not stated in this white paper) that may effectively combat hypertension in our society.

Background and Clinical Measurements for Hypertension

Blood pressure is the amount of blood force that impacts the heart, when it contracts and relaxes with blood. Two measurements are taken when measuring a person's blood pressure. When the heart pumps and pushes blood through the body, that particular blood force is called the systolic pressure. When the heart relaxes and fills back up with blood, that blood force is called the diastolic pressure. When someone gets their blood pressure measured, it is always presented as two numbers. The top or first number is the systolic pressure, and the bottom or second number is the diastolic pressure.

The universally accepted measurement for a normal and healthy blood pressure is one that is less than 120mmHG/80mmHG. If one's systolic pressure is between 120-139mmHG or their diastolic pressure is between 80-89mmHG, they are considered prehypertensive or on their way to having high blood pressure or hypertension. If one's systolic pressure is over 140mmHG or their diastolic pressure is over 90mmHG, they are considered to have hypertension. Understanding these basic terminologies and measurements for blood pressure is important, so people in all sectors and environments can properly know, control and prevent hypertension around them.

Risk Factors for Hypertension

There are many *risk factors* for hypertension that bring the illness to fruition. As people *age* their hypertension risk also increases, since people engage in behaviors over time that support the illness' development. *Race* is another factor for hypertension, as Blacks are more likely than other racial groups to develop hypertension. This predisposition to hypertension among Blacks is caused by a combination of factors. Some of these factors are socially and economically related, which will be discussed later on in this paper. A person's *genetic*

makeup can also influence their likelihood of having hypertension as proven by many scientific studies. A person who is *overweight* or *obese* also has a higher propensity of being hypertensive, since their hearts must pump harder to feed the body with sufficient blood. An inactive person is also more prone to hypertension, since their heart rates and stress levels are usually higher than active people's levels. Moreover, inactivity also influences people to be overweight or obese.

Drinking *too much alcohol* is another culprit for hypertension, as studies learned that consuming too much alcohol can damage a person's heart. Another known cause for hypertension is the ingestion of *too much sodium* in one's diet, as sodium causes people to retain fluids, increasing their blood pressure. Using *tobacco and/or smoking* are other behaviors that influence people to become hypertensive, since the chemicals in tobacco can narrow a heart's artery walls, forcing it to pump faster. Consuming *insufficient amounts of potassium* can also trigger hypertension, because potassium helps regulate sodium in one's blood. Without proper amounts of potassium, sodium may accumulate in one's blood and raise that person's blood pressure. Another factor that is legendary for creating hypertension is *stress*, something that everyone encounters on a daily basis for a variety of factors. Even though it is self-explanatory, frequent stress in one's life can truly raise their blood pressure. Moreover, stress influences people to engage in problematic behaviors responsible for hypertension such as—smoking tobacco, drinking alcohol, and eating unhealthy foods and snacks. Knowing these risk factors for hypertension is essential, so proposed programs and policies can target them effectively when trying to reduce hypertension in the US.

Impact of Hypertension in the General Population

Hypertension is a prevalent condition that impacts American lives in many ways. It is a primary risk factor for heart disease and stroke, the first and second leading causes of death in the US. Currently in the US, roughly 70 million people (about 1 in 3 adults) have hypertension. One in 3 adults is also prehypertensive and may develop hypertension in the near future. In addition, 1 in 5 Americans with hypertension is unaware of their condition. This is troubling, since 7 out of 10 Americans (who experience their first heart attack) also have hypertension. Likewise, 8 out of 10 Americans (who experience their first stroke) and 7 out of 10 Americans (with chronic heart failure) also have hypertension. In 2013, hypertension was a primary or associating cause of death for nearly 360,000 Americans, constituting about 1,000 deaths each day. Despite these grotesque numbers, only about half of Americans (*52%*) with hypertension have their blood pressure under control. From an economic standpoint, hypertension costs the nation roughly 46 billion dollars in costs each year due to health care services, missed days of work, and hypertensive medications.

The impact of hypertension on the *US health care system* is important to discuss. In 2009, health care providers were visited roughly 55 million times by patients who needed hypertension treatment. In 2011, hospital outpatient departments experienced about 3.7 million visits, where hypertension was the primary diagnosis.

In 2012, about 34 million patients were diagnosed with hypertension upon visiting their physician. Concerning gender, men and women have similar rates of hypertension over the course of their life. However, men under 45 years old are more likely to have hypertension than women in the same age group, while women over 65 years old are more prone to hypertension compared to men in the same age group. Regarding race, Blacks experience higher rates of hypertension than Whites and Hispanics, where 2 out of every 5 Black adults have hypertension in the US. Moreover, Black women have slightly higher hypertension rates than Black men at the national level. Thus, it is clearly apparent that hypertension devastates the health care system, men, women and Blacks in this country.

Social determinants of health influence all people in this country but negatively impact Blacks at greater levels, prompting them to develop hypertension and other conditions at higher rates than all other groups. In most cases, these social determinants of health are not directly health related but affect Blacks indirectly. Some of these indirect factors include—*poverty, unemployment, exposure to violence/crimes, racism, air pollution, poor access to healthy foods and beverages, severe housing problems, and poor access to quality health care*. Examples of these conditions include—being unable to pay bills due to unemployment or a low playing job; living near or around crime; consuming unhealthy foods since healthier options are not located within a person's living vicinity; experiencing or observing racism personally, locally and even nationally; inhabiting poor building structures; or living in poverty. These factors influence Blacks on a daily basis and do so, sometimes, simultaneously. These sorts of situations plague people living in low-income and impoverished communities and have been doing so for decades. Thus, public health efforts must consider these realities and continue battling the social determinants of health triggering hypertension. In addition, community members and concerned parties can also assist this effort by educating their political leaders on policies and/or strategies that can alleviate the burden of hypertension in their community.

Impact of Hypertension in Kent County, Michigan

Kent County, Michigan is located in the western part of the state and home to Grand Rapids, Michigan's second largest city. The hypertension rate in Kent County (*30.2%-2011*) is lower than the hypertension rate for the state of Michigan (*34.6%-2013*) and the US (*31.4%-2013*), but this finding does not tell the full story. An analysis conducted by the "Sperling's Hot Spots Report" ranked Grand Rapids as the 19th worst city for hypertension in the US, based on hypertension prevalence, hypertension prescriptions per capita, and the high prevalence of lifestyle factors contributing to hypertension. The hypertension picture in Kent County intensifies more when reviewing hypertension rates by race. Blacks (*34.7%-2011 and 2013*) experience significantly higher rates of hypertension compared to Whites (*30.9%-2011 and 2013*) in Kent County, reflecting the hypertension reality existing for Blacks across many US cities. Therefore, it is imperative for local efforts to create strategies, programs and/or policies to reduce the prevalence of hypertension among Blacks in Kent County, Michigan.

Current Strategies to Reduce and/or Control Hypertension

There are many *recommended strategies* to reduce and/or control hypertension in the general population. Many of these strategies are directly associated with the risk factors mentioned earlier in this paper. To reduce one's chances of developing hypertension and/or better control their hypertension, one can adhere to the following, proven recommendations:

1) Engage in moderate physical activity at least 150 minutes per week;
2) Consume healthier foods or follow the DASH Diet: www.nhlbi.nih.gov/health/resources/heart/hbp-dash-index. The DASH Diet is clinically proven to lower blood pressure in hypertensive individuals.
3) Consume less sodium and no more than 1,500mg per day (or 0.75 teaspoons);
4) Take a antihypertensive medication if prescribed by a health care provider;
5) Reduce stress levels;
6) Drink plenty of water (about 8 glasses of water per day);
7) Maintain a healthy weight. Consult your health care provider about a healthy weight for you;
8) Regularly check blood pressure to monitor its status;
9) Limit alcohol consumption or no more than one drink per day for women and no more than two drinks per day for men;
10) Do not smoke or use tobacco products;

If the recommendations above are followed, they can significantly prevent and/or control hypertension in one's life. However, public health efforts have also discussed the importance and necessity of promoting *policy, systems and environmental (PSE) approaches* to combat hypertension at a population level. These PSE approaches can influence individual behaviors and do so at a greater degree. Below are some PSE and programmatic approaches that have been suggested or recommended by several public health entities including CDC's Division for Heart Disease and Stroke Prevention to address the burden of hypertension in the US. GRAAHI and other health organizations can consider the following recommendations:

1) Focus more public health research on Blacks, since they experience greater rates of hypertension than other racial groups. Many of GRAAHI's research efforts target Blacks, thus GRAAHI can use its connections and reputation to potentially develop and implement county-wide surveys or focus groups to capture behavioral trends and perceptions within the Black community concerning hypertension.
2) Work and collaborate with nontraditional partners such as barbershops and churches that provide access to GRAAHI's primary target audience. GRAAHI previously and currently conducts programs or strategies in barbershops and churches, so utilizing these avenues and collaborating with them on hypertension efforts may be an effective strategy.

3) Educate providers and practitioners on cultural and psychosocial factors that hinder Blacks from seeking medical treatment. Improving the cultural sensitivity of providers will help them better relate and treat patients, since patients would feel more comfortable with them.
4) Examine the local, political environmental for current policies or strategies that may be preventing Blacks or other high-need groups from engaging in healthy behaviors.
5) Provide incentives to community members to engage in healthy behaviors, which is proven to increase their compliance.
6) Be active locally and engage community members with different initiatives. For example, provide community members with specific locations, where they can exercise or buy healthy foods/beverages. Moreover, saturate the community with the organization's messages through radio, posters or television spots, increasing the organization's visibility and reach to its community. These efforts increase a program's chances of being effective and impactful.
7) Collaborate with other programs (such as diabetes or stroke programs) that share the same goal of hypertension prevention. Some of these programs may already have strategies that can be assisted or adopted.
8) Develop and disseminate culturally tailored messages on hypertension through brochures, toolkits and commercials.
9) Help community members obtain health care coverage by connecting them to a health care system or provider. GRAAHI's Care Connect Program currently does this.
10) Develop a mass media campaign that educates community members on the importance of reducing their sodium consumption.
11) Advocate for policies that can reduce the hypertension risk in the local community such as a policy that increases the price on tobacco and/or alcoholic products.

The creation, adoption, implementation and/or enforcement of these PSE approaches in Grand Rapids, Michigan could truly fight the hypertension epidemic that is prevailing in the US. Moreover, the World Health Organization (http://ish-world.com/downloads/pdf/global_brief_hypertension.pdf) offered the following policy recommendations to combat hypertension too:

1) Restrict and/or ban marketing for alcoholic products;
2) Limit the sale of alcoholic products in certain establishments;
3) Ban smoking in indoor and work site locations;
4) Increase the prices or taxes on tobacco products;
5) Restrict the sodium content in processed foods;
6) Replace trans-fats with polyunsaturated fats;

Recommending and/or instituting these policies to prevent and/or control hypertension would require collaboration and support from political and community leaders who share the same goals with hypertension.

Innovative Strategies to Reduce and/or Control Hypertension

The Research Department at GRAAHI proposes the following, *innovative strategies at the individual, community and policy levels* to address hypertension and its associated outcomes. Mostly, these innovative recommendations focus on indirect factors or social determinants of health that trigger hypertension in inconspicuous ways:

1) Partner with West Michigan companies and conduct job fairs to employ Blacks who experience the highest unemployment rates in West Michigan. Employing people with jobs would potentially reduce their blood pressure rates.
2) Assess cultural trends and develop urban messages that are culturally tailored to Blacks. Create quick videos or skits and promote these messages on GRAAHI's web site and twitter accounts. These messages could focus on healthy behaviors such as consuming foods with less sodium and exercising more.
3) Create more visibility and provide support to campaigns such as "Grade School to Grad School" that mentor Black students and prepare them for future success in Grand Rapids, Michigan. Creating educational opportunities for Black children will increase their chances of obtaining a college degree, enhancing their ability to get a reliable job in adulthood. This could potentially lead to lower stress and blood pressure rates in this population.
4) Advocate for policymakers to improve the safety and infrastructure in low-income neighborhoods. These community improvements could possibly influence the establishment of more businesses and jobs in these areas, reducing stress levels and blood pressure rates in these locations too.
5) Develop a culturally-tailored phone app or media campaign that provides community members with visibility to food options that are healthy and affordable in Grand Rapids, Michigan.
6) Create a campaign to educate Blacks on the dangers of hypertension using personal stories of Blacks who died suddenly from heart attacks and strokes. This sort of scare campaign is used frequently in smoking cessation commercials today.
7) Use mHealth (or mobile health) technologies to connect Blacks to health information in their homes. This strategy could provide Blacks with educational information on hypertension, including places where their blood pressures can get checked.

Summary of Solutions and Next Steps

This white paper passionately outlined and discussed the reality and consequences of hypertension in this country and in Grand Rapids, Michigan. This paper also examined hypertension disparities, current recommendations and innovative strategies that can reduce hypertension rates in this country. When reviewing these recommendations, it is imperative for each organization or individual to understand the political, social and environmental context around them. Knowing the current policies, strategies and programs in their cities and states will help organizations fight hypertension and its associated conditions at a more effective level. Moving forward, GRAAHI may want to adopt and implement some of the recommendations in this paper to address hypertension disparities in Grand Rapids, especially for Blacks. To assist this effort, GRAAHI's Research Department plans to develop a policy brief on hypertension that could be presented to policymakers in Grand Rapids, helping them better understand the health and economic benefits of hypertension prevention and control in West Michigan. Overall, GRAAHI's Research Department will continue to promote proven recommendations and innovative strategies to tackle the critical topic of hypertension in West Michigan.

*Sources for stated findings or data in this white paper are available upon request.

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