Hypertension Education
In a Community Health Center Setting

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Introduction

According to the Centers for Disease Control and Prevention High Blood Pressure Fact Sheet, hypertension is defined as a blood pressure of higher than 140mmHg systolic pressure and 80mmHg diastolic pressure. Prehypertension is considered 120-139mmHg systolic pressure and 80-89mmHg diastolic pressure. A normal blood pressure is considered to be less than 120 mmHg systolic over 80mmHg diastolic pressure.

Understanding the Problem

Unfortunately, the CDC High Blood Pressure Fact Sheet reports that almost a third (31.3%) of American adults has Hypertension. It must also be noted that 1 in 4 American adults also have prehypertension. These proportions are projected to increase. “Normal” blood pressure is becoming exceptional.

Understanding the Location

I was placed in Jackson, Mississippi at the Jackson-Hinds Comprehensive Health Center. Jackson is the state capital of Mississippi, and is located in Hinds County slightly to the south and west of the center of the state of Mississippi. The Jackson-Hinds Comprehensive Health Center has many satellite clinics including clinics in the Mississippi cities of Utica, also in Hinds County, Hazlehurst in Copiah County, Vicksburg in Warren County, and the Homeless Clinic, South Clinic, and Medical Mall Clinic in Jackson.

The main Jackson-Hinds Comprehensive Health Clinic is the Dr. James Anderson Health facility. It is located in Jackson at 3502 West Northside Drive, conveniently right off of I-220 at the intersection of Medgar Evers Boulevard and Northside Drive, two of Jackson’s biggest streets.

The Jackson Medical Mall is at 350 West Woodrow Wilson Drive in Jackson between I-220 and I-55. It is literally an old mall that has been filled with businesses that predominately offer health and human services. The University of Mississippi Medical Center has many primary and specialty care clinics. In partnership with the University of Mississippi Medical Center, Jackson-Hinds Comprehensive Health Center physicians staff a Health Clinic at the Medical Mall. Through this partnership, University of Mississippi Medical Center residents have an opportunity to learn in a Community Health Center environment. This Partnership is one of a few of this type. This residency model is currently being observed by many academic institutions in this country.
The Homeless Clinic is located at 327 Gallatin Street in Jackson, and serves any person seeking services. A large portion of its patients however are homeless, or are newly released prisoners.

The South Jackson Clinic is located at 145 Raymond Road in Jackson.

The Utica Clinic, Vicksburg Clinic, and Hazlehurst clinics are all a 40-50 minute drive from the Jackson-Hinds main site.

Utica is located in Hinds County southwest of Jackson.

Vicksburg is directly to the west of Jackson, almost in Louisiana. The Vicksburg clinic is located at 1203 Mission Park Drive.

Hazlehurst is south and slightly west of Jackson in Copiah County.

There is also a clinic in Tougaloo, but the Jackson-Hinds Comprehensive Health Center only provides dental services there.

**Understanding Clinic Population**

According to GE-NMF Primary Care Leadership Program Orientation Packet Section IIIa, the population of Mississippi is less healthy than the national average. This is especially true when referring to factors contributing to hypertension. The Demographic and Health Data sheet shows a rate of premature death that is approximately twice the national average. Roughly 22% of Mississippians are considered in poor or fair health compared with only 10% of the general United States population. Hinds County is slightly better than the rest of Mississippi with only 20% considered in poor or fair health, but still significantly behind the national average. Mississippians are reported to have more poor physical health days than the national average, as well as more poor mental health days. Low birthweight is also more common in Mississippians. Adult smoking in Mississippi is 24%, compared to the national average of 14%. Section IIIa cites Mississippi adult obesity as 36%, compared a national average of 25%. Physical inactivity is reported as 33% in Mississippi, compared to the national 21%. Excessive drinking is even more common in Mississippi than nationally. All of these factors are risk factors for hypertension.

Orientation Packet Section IIIa reports that in Mississippi, there is on average 1 primary care physician per 1,155 patients, with the national average being 1 primary care physician per 631 patients. Hinds County, where the main Jackson-Hinds site is located, is much better than the Mississippi average with 1 primary care physician per 711 patients. Even though it is better than the rest of the state of Mississippi, Hinds County is still worse than the national average. This
physician to patient ratio is important. Educating patients about hypertension and speaking with patients in depth about lifestyle takes time. According to Section IIIa, there is considered to be no limited access to healthy foods nationally, but in Mississippi there is limited access for 11% of people and in Hinds County, 18%. Fast food restaurants are used by 25% of the nation, but by 55% of people in Mississippi and 62% of people in Hinds County. According to the American Heart Association, it is known that African Americans are at risk for hypertension due to salt sensitivity, and possibly also due to increased rates of diabetes and obesity. Section IIIa cites African Americans as making up 37% of the Mississippi population versus only 12% of the nation. When this is considered, along with the previously mentioned risk factors which are prevalent in Mississippi, it is not surprising that physicians in Mississippi see a disproportionately high number of hypertension patients.

**Developing the Intervention**

Project development began with interest in a topic related to obesity or its sequelae. While the obesity epidemic is a problem that needs to be targeted, it is more socially acceptable to target obesity from a hypertension standpoint than directly.

I met with and or shadowed many clinicians including Dr. Jackson in Family Medicine, Dr. McNair, Dr. Hutchins, Dr. Rice, and Ms. Watson in Adult Medicine, Dr. Watson, Ms. Burr, and Dr. Assad in Pediatrics, Dr. Attipoe, Ms. Gordon, and Ms. Mayeaux in Women’s Health. I also got to shadow nutritionist, Ms. Tammy Hawes, social worker Ms. Martha Magnuson, and Mrs. Mason, a Jackson-Hinds Comprehensive Health Center employee who is involved in a Morehouse College Hypertension study. All clinicians and staff members that I spoke with gave me different perspectives on the issue of hypertension.

Dr. Jackson, Family Practitioner at the Utica Jackson-Hinds Comprehensive Health Center site emphasized the importance of one-on-one patient education and allowed students shadowing to utilize a survey created by Dr. Rice, Jackson-Hinds Comprehensive Health Center Director of Internal Medicine, to gauge patient understanding and health maintenance. The survey was administered while patients waited in exam rooms for the physician. The survey was then used as a platform to target areas in which patients need education. The survey engaged patients and seemed to make them feel involved in their medical care, in addition to keeping them occupied while they were waiting on Dr. Jackson to enter the room. Both the patient perception of a shorter wait time, and a back and forth conversation with the physician or student about health concerns seemed to increase patient satisfaction.
Dr. Herman Taylor of the Jackson Heart Study referred me to Dr. Deborah Minor, also of the Jackson Heart Study. Dr. Minor, with Dr. Richard deShazo and Mr. Michael Jones, have a program that enables volunteers to be health advocates. Dr. Minor, Dr. deShazo, and Mr. Jones are involved with both Train the Health Advocate Programs and Train the Trainer programs. I was able to attend a Train the Trainer Session and get certified. Highlights of the program training included learning the efficacy of teaching a patient to read a BMI chart, and how to give basic dietary advice. Participants also learned how to take blood pressures and blood glucose readings. Participants of the program ranged from nurses to pastors to concerned community members.

The Intervention

A survey concerning hypertension was chosen to function, like Dr. Rice’s survey, as a patient education tool. Results could also be collected to see if there is a population of patients that is being missed by health education efforts. The survey is included in Appendix A for reference.

In addition to the survey, handouts were employed to give to patients so that they could better remember educator discussion and share health education with their families and friends.

Several handouts were collected. Mr. Thomas Payne of the ACT Center, a University of Mississippi Medical Center Tobacco Cessation Clinic at the Jackson Medical Mall, gave handouts both for the ACT Center and for the 1-800-QUIT-NOW Mississippi Tobacco Quitline. These brochures are shown in Appendix B and C respectively. Both of these interventions are free to participants. While the Mississippi Tobacco Quitline works primarily via telephone, the ACT Center requires participants to come to the Jackson Medical Mall. In addition, a Hypertension Overview handout provided by WIC Nutritionist Ms. Tammy Hawes was used. The Hypertension Overview handout is shown in Appendix D.

Several handouts were made. The first, shown in Appendix E, is a sheet of simple diet and exercise tips. The second, shown in Appendix F, is simply a colorful and easy to read BMI chart that was found online. The third, shown in Appendix G, is a sheet of active games for children to play outdoors.

Mrs. Mason, a Jackson-Hinds Comprehensive Health Center employee who is in charge of the Jackson branch of a Morehouse College Hypertension Study, reviewed both survey and handouts.
The survey was approved by Dr. Rice, Director of Internal Medicine at Jackson-Hinds Comprehensive Health Center. Handouts were approved by Ms. Singleton, Nursing Director at Jackson-Hinds Comprehensive Health Center.

**Components**

**Edwards, Mississippi**

Edwards, Mississippi will be the site of a new Jackson-Hinds satellite clinic. July 10th, a hypertension education session was given at the Edwards Neighborhood Center in conjunction with GE-NMF Primary Care Leadership Program scholar Hal Flowers’ project “An Assessment of Community Health Needs in Edwards, Mississippi.” All participants received a copy of each handout. No surveys were administered.

**Survey Distribution**

Fellow GE-NMF Primary Care Leadership Program scholars Hal Flowers and Carolita Heritage collected the surveys that were distributed at the Homeless Clinic and South Jackson Clinic.

Vicksburg and Hazlehurst clinic surveys were dropped off and later collected by the author. An informal waiting room education session with the assistance of handouts was performed in Hazlehurst.

Utica clinic surveys were administered while shadowing and patient education was performed by the author. Handouts were distributed as needed. When more than basic education was needed, it was provided by Dr. Jackson.

**Results**

There were 47 surveys. Surveys were only administered to adults. Age ranges polled were 29 and younger, 30-39, 40-49, 50-59, and 60 and older. There were at least 7 surveys per age group with 7 participants 29 and younger, 8 participants 30-39, 8 participants 40-49, 14 participants 50-59, and 10 participants 60 and older.

Because of the small sample size, surveys from multiple sites were compiled. Results are shown in Tables 1-5.

In addition to the survey results, there were immediate positive results to the project. Because of the “Does lack of money ever prevent you from getting your
medications?” question, one hypertensive woman who had not previously been identified as needing to see the social worker was sent to the social worker.

Most participants who received education identified an area that they wanted to improve in, such as decreasing sodium in diet, or losing weight.


**Evaluation**

The 30-39 year old age range was the least likely to get the high blood pressure risk factor question correct, with only 37.5%, compared to the next lowest groups, 29 and younger and 50-59, which were tied with 51.7%.

The 30-39 year old age range was also the least likely to know that there is quite a bit of sodium in sodas at 37.5%. The next lowest group was the 40-49 year old age range with 50%. 100% of 29 and younger participants knew that sodas are a source of sodium.

The 30-39 year old age range was the most likely to drink regular sodas at 87.5%. The next lowest groups were the 29 and younger and the 50-59 groups, which were tied with 51.7%.

100% of 30-39 year old participants wanted further education. The next highest group was the 40-49 year olds with 87.5%, closely followed by the 50-59 year olds with 85.7%.

**Conclusion**

Although the 30-39 year old age range appeared to be the least educated according to the survey, they were the most receptive to hypertension education. Because these 30-39 year old patients should have long lives ahead of them, it is imperative that education efforts be focused on this age group.

**Acknowledgements**

Thank you GE and National Medical Fellowship for providing such an excellent summer opportunity.

Thank you Faculty Advisor, Dr. Thais Tonore of the University of Mississippi Medical Center, Clinical Advisor, Dr. Jasmin Chapman, CEO of Jackson-Hinds Comprehensive Health Center. In addition, thank you Dr. Lynda Assad, Jackson-Hinds Comprehensive Health Center Medical Director and Director of Pediatrics, and Dr. Nedra Jackson, Family Practitioner at the Utica clinic, for providing valuable assistance and encouragement.

Through Jackson-Hinds Comprehensive Community Health Center, I was able to learn leadership skills by speaking with community health leaders including:

- Dr. John Patterson, Clinical Director, Jackson-Hinds Comprehensive Health Center
- Mr. Jeffrey Aldridge, CFO Jackson-Hinds Comprehensive Health Center
Mr. Robert Pugh, Mississippi Primary Healthcare Association
Mr. Frank Crump Jr., Board Chair, Jackson-Hinds Comprehensive Health Center
Ms. Sandra Gray, Safety Officer Jackson-Hinds Comprehensive Health Center
Ms. Beneta Burt of Mississippi Roadmap to Health Equity
Mr. Michael Jones of Healthy Linkages and Train the Trainer
Dr. Richard deShazo of Southern Remedy and Train the Trainer
Dr. Deborah Minor of the Jackson Heart Study and Train the Trainer
Dr. Herman Taylor of the Jackson Heart Study
Mr. Justin Smith, Compliance Officer, Jackson-Hinds Comprehensive Health Center
Ms. Amber Clark, Jackson Heart Study Scholar, M2 at Brown University School of Medicine
Ms. Bass, Diabetes Educator, Jackson-Hinds Comprehensive Health Center
Ms. Mason, Coordinator, Jackson Portion of Morehouse Hypertension Grant

In addition, I attended:

- 2 Board Meetings
- Managerial Meeting
- Quest Lab Group Meeting
- Region 4 Infertility Prevention Project meeting
- State Department of Health meeting
- Concordant Healthcare Solutions meeting
- Delta Health Alliance meeting
- Jackson, Mississippi Mayor Harvey Johnson Jr.’s State of the City Address

Thank you to all of the clinicians and employees of Jackson-Hinds Comprehensive Health Center who took the time to speak with me and impart wisdom, with special thanks to Ms. Wanesley and Ms. Bradley for their daily assistance.

I feel that all of my experiences in Jackson were exceptional. Each experience and interaction helped me shape my project, as well as my interactions with patients.

Thank you fellow GE-NMF Primary Care Leadership Program Scholars Hal Flowers, Carolita Heritage, and Kristy Alvarez for providing support and encouragement.
Works Cited

ACT Center, The University of Mississippi Medical Center. ACT Center for Tobacco Treatment, Education and Research. Flyer used to publicize University of Mississippi Medical Center’s ACT Center.


GE-NMF Primary Care Leadership Program. Orientation Packet Section IIIa Demographic and Health Data by City. File that was given to GE-NMF Primary Care Leadership Program scholars at Site Orientation.

Mississippi State Department of Public Health. 1-800-QUIT-NOW. Flyer used to publicize Mississippi’s 1-800-QUIT-NOW Tobacco Quitline.

WIC Department, Jackson-Hinds Comprehensive Health Center (2008). Hypertension also known as High Blood Pressure. Flyer used by Jackson-Hinds Comprehensive Health Center WIC Nutritionists.
Appendix A

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**Hypertension Survey**

Please take a moment to fill out this anonymous survey about Hypertension (High Blood Pressure). This survey will be used for research and education purposes only, and no compensation will be provided. Thank you for your time!

### General Information

**How old are you?**
- [ ] 10-19
- [ ] 20-29
- [ ] 30-39
- [ ] 40-49
- [ ] 50-59
- [ ] 60-69
- [ ] 70 or older

**Does lack of money ever prevent you from being able to get your medications?**
- [ ] Yes
- [ ] No

**Are you male or female?**
- [ ] Male
- [ ] Female

### Hypertension Questions

**Have you ever been told that you have high blood pressure?**
- [ ] Yes
- [ ] No

If Yes, is it currently being controlled?
- [ ] Yes
- [ ] No

**Which of these makes a person at risk for getting high blood pressure?**
- [ ] A lot of salt (sodium) in the diet
- [ ] Being overweight
- [ ] Family history
- [ ] Smoking
- [ ] Drinking too much alcohol
- [ ] All of the Above

**Do you have Diabetes (High Blood Sugar)?**
- [ ] Yes
- [ ] No

**Do you drink regular soft drinks?**
- [ ] Yes
- [ ] No

**Did you know that soft drinks contain a lot of salt (sodium)?**
- [ ] Yes
- [ ] No

**Do you exercise regularly?**
- [ ] Yes
- [ ] No

If Yes, how many days a week? ______

**Do you have a way to regularly check your blood pressure?**
- [ ] Yes
- [ ] No

**Would you like to receive more education about ways to prevent or manage high blood pressure?**
- [ ] Yes
- [ ] No

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Please ask your doctor if you have any questions about High Blood Pressure. Thank you for participating.
Appendix B

ACT Center for Tobacco Treatment, Education and Research
THE UNIVERSITY OF MISSISSIPPI MEDICAL CENTER

ACT Center Tobacco Treatment Clinics provide state-of-the-art treatment to help people quit tobacco and stay quit. Clinics are located throughout Mississippi.

Patients meet with a Certified Tobacco Treatment Specialist (CTTS) for an evaluation, identify assets and barriers to quitting, and develop a treatment plan to maximize each person’s chance for success. Each person also learns about the program and what to expect.

A key feature of the program is to help patients develop skills and strategies to break the cycle of nicotine addiction. Changes in behaviors, thinking, and emotional reactions greatly improve the chances of remaining tobacco free over the long term.

Managing the physical aspects of addiction to nicotine is equally important. Recommendations for a medication regimen will be developed based on each patient’s tobacco use, medical, and psychosocial history. We prefer to work with each patient’s regular doctor (if not currently under a physician’s care, other arrangements can be made). All FDA approved tobacco treatment medications are available: Nicotine Replacement products (patch, gum, lozenge, inhaler), Chantix, and Zyban.

The patient is scheduled for treatment sessions once a week for 6 weeks, and is expected to be present at each session to receive counseling and medications. If a session will be missed, we ask that the patient call to reschedule before the next appointment. Finally, we will follow-up with the patient for 1 year.

Counseling and medication services are provided at no cost to the patient.

Patients may also contact the Mississippi Tobacco Quitline at 1-800-QUIT NOW

Tobacco Treatment Services for Mississippians who want to quit tobacco for good

Appointments Required

Hours of Operation:
Monday – Friday
8:00 am to 4:30 pm

Phone: 601.815.1180
Fax: 601.815.5986
Web: www.act2quit.org

Jackson Medical Mall, Suite 611
350 West Woodrow Wilson Avenue
Jackson MS 39213

This program is funded by state appropriation to the UMMC Cancer Institute and a grant from the Mississippi State Department of Health.
Callers to the Mississippi Tobacco Quitline who want to stop using tobacco can receive up to eight weeks of nicotine replacement therapy (NRT), patch or gum, at no charge. Callers must complete an Intake and agree to participate in cessation counseling in order to receive the products. Medical clearance is necessary when medications are provided.

The approach of combining counseling and medication has been shown to be one of the most effective options currently available.

**Will I get all eight weeks at one time?**

No, once medically cleared to participate, NRT will be ordered in two week increments and delivered to the participant. Cessation counseling is required between the orders.

**Who can call the Tobacco Quitline?**

Any Mississippian can call the toll-free number from anywhere in the state. 1-800-784-8669.

**What are the hours?**

The Tobacco Quitline is available from 7:00 am until 9:00 pm, Monday through Thursday; 7:00 am until 7:00 pm, Friday and 9:00 am until 5:30 pm on Saturday. Voicemail is available.

*The Mississippi Tobacco Quitline is funded by a grant from the Mississippi State Department of Health*
HYPERTENSION
also known as
HIGH BLOOD PRESSURE

What is hypertension?
Hypertension means the same thing as high blood pressure and is the leading cause of stroke in adults. High blood pressure can also cause other bad health problems if it is ignored.

What is blood pressure?
Blood is carried from the heart to all parts of your body in vessels called arteries. Blood pressure is the force of the blood pushing against the walls of the arteries. Each time the heart beats, it pumps out blood into the arteries.

How do they measure my blood pressure?
A doctor or nurse will wrap a cuff around your upper arm, pump the cuff full of air, and then let it out really slow while they listen to your heart through a stethoscope. The instrument that measures your blood pressure is called a sphygmomanometer.

Blood pressure is always measured as 2 numbers. The first or top number is the systolic pressure and the second or bottom number is the diastolic pressure. It is measured in millimeters of mercury which is written as "mmHg."

Systolic – This is when your blood pressure is the highest. Ex. 120
The heart will beat and the blood will be pumped.

Diastolic – This is when your blood pressure is the lowest. Ex. 80
The heart is between beats and is resting.

Normal blood pressure is 120/80 mmHg. But when the numbers are 140/90
mmHg or higher, then that means high blood pressure, or hypertension.

What can I do to keep my blood pressure at a healthy level?

- Do not eat a lot of salt
- Be active

- Eat healthy with fresh fruits, vegetables, and whole grain

July 2008

SOURCES: Teens Health, American Heart Association, National Heart, Lung, and Blood Institute
Appendix E

Tips for Losing Weight

- Cutting out drinks with calories is an easy way to lose weight. **Drinking water** instead of sweet tea or soda fills you up without adding to your calories for the day. If you don’t like water, diet “zero calorie” drinks are the next best thing.

- **Looking at what you eat helps.** Try writing down what you eat and drink in a day, and how much. What on your list is healthy? What is not healthy and why? Is there something that you wish you hadn’t taken in? Try this for a day or two. Is your list improving with time?

- Calories are a measure of how much energy food provides. You can read about these on food and drink labels. **Anyone that takes in fewer calories than they burn in a day loses weight.**

- By **putting half the amount of each food on your plate you normally would,** or sticking half of your sandwich in the frig for later instead of eating it, you can cut calories and still enjoy the same foods you normally eat.

- **It is not healthy to take in fewer than 1,200 calories in a day.** If you want to lose weight, you can try taking in only 1,400 calories a day. It is safe to lose up to 2 pounds per week.

- Try to eat balanced meals. Eat a **protein** - for example beans or meat, a **vegetable** - for example plain boiled squash, a **fruit** - for example a few figs, a **dairy product** - like nonfat yogurt, and a **whole grain** - like a piece of whole wheat bread, for a filling but healthy meal. Some things fit into multiple categories, like a container of fruit yogurt has fruit, dairy, and protein.

- It might be most helpful to find a **friend who is leading a healthy lifestyle.** Learn what they do to stay healthy and try some of their ideas. Sharing healthy recipes is always fun!

- **Exercise.** If you have certain health conditions like arthritis in your knees, you may not be able to jog like a 20 year old, but talk to your doctor. Exercises like swimming, biking, and walking may still be OK for you. Exercise has been shown to decrease appetite!

- You can be healthy even when you’re busy. **Just make the best choices that you can.**
# Appendix F

## Body Mass Index

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Source: [http://simon-ville.blogspot.com/2011/03/time-to-focus-on-bmi.html](http://simon-ville.blogspot.com/2011/03/time-to-focus-on-bmi.html)
Appendix G

Games to Play Outdoors

Summer is a great time to get outdoors in the evenings and play games! Here are a few fun ideas that you and your child might enjoy!

**Traditional Tag:** Whoever is declared “it” must chase friends. Once the person who is “it” tags another person, they’re “it”!

**Freeze Tag:** Whoever is “it” has to catch the other players. When a player is caught, they have to freeze in place. The only way to unfreeze is to be tagged by another player who is not “it.” When everyone is frozen, “it” gets to choose the new “it”.

**Hospital Tag:** Like tag, but when tagged by “it”, you can’t use the part of the body you were tagged on. If “it” tags your arms, you cannot use your arms. If your legs are tagged, you can pull yourself with your arms across the ground. Other players can “heal” players if they tag the affected frozen part. “It” gets to pick a replacement “it” when none of the other players can move.

**Hide and Seek:** The person who is the seeker shuts and covers their eyes and counts to a specified number. (This counting time can increase for older children who may need more time to hide.) The first person the seeker catches is “it.”

**Chain Hide and Seek:** As children are caught by the seeker, they join hands with the seeker and go around to find the others. Children join the chain until everyone is found.

**Spotlight:** Type of hide and seek that requires a large yard and a flashlight. This is good for older children and is best done at night. Whoever is “it” counts to a large number to give everyone a chance to hide. Changing of hiding places while the seeker is searching is permitted! Whoever is “it” has a flashlight. To catch someone, they shine the light on the hidden person and say “Spotlight (insert caught player’s name)” The caught player is then it.