



“Check It. Change It. Control It. Your Heart Depends On It.” High Blood Pressure and High Cholesterol Toolkit Project

Project Needs Assessment

African-American male patients are at high risk of cardiovascular disease. No conclusive studies exist that explain why that’s true. However, studies have linked hypertension to different ways African-American men metabolize salt^{1,2}. Environmental factors such as a high-salt, high-fat diet and stress also have been implicated.

Regardless of the cause(s), the effects are alarming:

- African-American men are 1.5 times as likely as non-Hispanic white men to have hypertension.
- In 2007, African American men were 30 percent more likely to die from heart disease compared to non-Hispanic white men.
- African Americans overall have the highest rate of hypertension of all groups and tend to develop it at a younger age than other groups.³
- Nearly 45 percent of African-American men have borderline-to-high cholesterol.
- In Ohio, African-American men are 53 percent more likely to die from stroke than any other group.
- African-American stroke survivors are more likely to become disabled and have difficulties with activities of daily living than their white counterparts.

Project Description

Over the past year and a half, the Ohio Academy of Family Physicians (OAFP) in partnership with the Ohio Department of Health (ODH) designed an educational outreach program called “Check It. Change It. Control It. Your Heart Depends On It.” The result of our partnership is a two-part outreach plan aimed to improve cultural sensitivity and communication skills among primary care physicians and a point-of-care patient information package for African-American men who are at risk for high blood pressure and high cholesterol. The tools created include: Physician guide, Patient brochure, folder and helpful tip-sheets.

The first approach in the project was to work with a small group of family physicians to pilot the effectiveness of the educational materials contained in the toolkit and secondarily to provide physicians with guidelines to help them achieve better outcomes and encourage positive doctor-patient partnerships. The “Check It. Change It. Control It.” patient and physician toolkits were developed based on the findings from focus groups with African-American male patients and structured interviews with family physicians “in the trenches.”

Scope of Work Outline

Phase 1: Project Start-up (December 2012 – January 2013)

- Established a physician workgroup to serve as technical advisors to the overall project (Sarah Sams, MD, Dennis Ruppel, MD and Gary LeRoy, MD).
- Selected a program champion to spearhead the pilot project (Gary LeRoy, MD).
- Outlined project components and create a detailed, six-month work plan.
- Determined clear objectives of the program with description of project goals including how toolkit materials will be measured for practice-based effectiveness (i.e. surveys).
- Physician workgroup will determine practice eligibility for pilot inclusion.

- Determined all printed and educational program components then prepare written expectations for practices wishing to be considered for the pilot.
- Determined incentive programs for pilot practices (i.e. stipend, patient incentives).
- Created pre and post surveys to measure process and effectiveness of toolkit materials in the practice setting.
- Created a practice recruitment registration tool - downloadable hard copy and online versions.
- Created a project timeline (to end by state fiscal year 6/30/13).

Phase 2: Practice Recruitment (January – February 2013)

- Created in-house communication pieces to outline and promote project objectives with the goal of recruiting 10 eligible pilot practices; Set clear expectations for pilot practices.
- Promoted practice recruitment opportunity in OAFP communication vehicles (*The Ohio Family Physician* magazine, *Weekly Family Medicine Update* e-newsletter, on the OAFP website at www.ohioafp.org, and direct mail if needed.)
- Recruited ten family medicine office practices to pilot the materials.

Phase 3: Project Management (March – June 2013)

- Mailed printed versions of the educational materials along with printed patient pre-test and post-test surveys.
- Hosted kick-off webinar for all selected practices to describe project objectives, discuss program components and clarify expectations – (Held on March 28 at 7:30 p.m. with Gary LeRoy, MD presenting).
- During the first few months of the pilot, OAFP staff contacted each practice to lend support or answer questions.

Phase 4: Data Collection and Reporting (June 2013)

- Worked with pilot practices to collect outcomes data and any raw survey information – due June 24.
- Analyzed data, compiled outcomes, and report findings to ODH, physician workgroup, and OAFP Board of Directors.

Pilot Project Outcomes

In April 2013, OAFP began piloting the toolkit in ten primary care practices. The practices were strategically recruited between January and April 2013 to achieve a representative sample of primary care practices across the state that serve African-American patients and include a mix of rural and urban practices. Practices received a modest stipend for participating. All African-American male patients age 18 and older at these practices were asked to participate and, if they agree, were given a pre-test risk assessment survey and a \$15 Subway gift card.

The survey measures awareness and knowledge about cardiovascular health and risk factors, as well as the patients' own health behaviors that affect cardiovascular health and blood pressure. The pre-test facilitated a discussion between the patient and physician about risks of high blood pressure and high cholesterol, and the patients were asked to consider making changes suggested in the toolkit. One month later, usually during a blood pressure or cholesterol check visit, by mail, or by a phone call from practice office staff, the patients were given a second \$15 Subway gift card and a post-test that measures changes in knowledge and behaviors, as well as solicits feedback on the toolkit itself. **102 patients completed both the pre-test and post-test surveys.**

An additional survey for practices solicited feedback about the overall pilot project, the patient education materials' usefulness in developing cultural sensitivity and building relationships with patients, and physician guideline materials. **Nine practices completed the survey; 18 individuals responded.**

Participating practices

- Eastside Family Medicine
- Wyoming Family Practice Center
- Metro Health
- Family Health Care
- East Dayton Health Center
- Dayton Primary & Urgent Care
- *The Christ Hospital Family Medicine Center - Mt Auburn
- Manuel Family Practice
- UC Health Primary Care – Forest Park
- Promedica Toledo Hospital Family Medicine Residency

*dropped out of the project due to lack of patient engagement

Practice location

University Heights
Cincinnati
Cleveland
Chillicothe
Dayton
Dayton
Cincinnati
Columbus
Cincinnati
Toledo

Overview Patient Pre-test Survey Results (Complete survey report attached)

102 patients completed both the pre-test and post-test surveys.

84.3% of patients surveyed reported that they meet with their physicians regularly.

13.7% of patients surveyed reported that they were not aware of their high risk for high blood pressure and high cholesterol.

24% of patients surveyed reported knowing the correct target number for a healthy blood pressure; **76%** of patients surveyed reported not knowing the correct target number for a healthy blood pressure.

19% of patients surveyed reported that they know the target number for healthy cholesterol; **81%** of patients surveyed reported that they did not know the correct target number for healthy cholesterol.

60% of patients surveyed reported that they knew their individual blood pressure level; **40%** of patients surveyed reported that they did not know their individual blood pressure level.

23% of patients surveyed reported that they knew their individual cholesterol level; **77%** of patients surveyed reported not knowing their individual cholesterol level.

Overview Patient-Post-test Survey Results (Complete survey report attached)

67% of patient surveyed reported that they know the correct target number for a healthy blood pressure; **33%** of patients surveyed reported not knowing the correct target number for a healthy blood pressure.

OUTCOMES MEASUREMENT: Improvement of 179% over baseline measurement.

44% of patients surveyed reported that they know the target number for healthy cholesterol; **56%** of patients surveyed reported that they did not know the correct target number for healthy cholesterol.

OUTCOMES MEASUREMENT: Improvement of 132% over baseline measurement.

74% of patients surveyed reported that they knew their individual blood pressure level; **26%** of patients surveyed reported that they did not know their individual blood pressure level.

OUTCOMES MEASUREMENT: Improvement of 23% over baseline measurement.

37% of patients surveyed reported that they knew their individual cholesterol level; **63%** of patients surveyed reported not knowing their individual cholesterol level.

OUTCOMES MEASUREMENT: Improvement of 23% over baseline measurement.

76.4% of patients surveyed reported that the “Check It. Change It. Control It.” toolkit helped them learn more about their risk for high blood pressure and high cholesterol and what steps that can be taken to overcome the risks.

73.5% of patients surveyed reported that they felt confident or very confident that they had a good understanding of their risk.

- Vince – Very confident after reading the materials.
- Bill – The toolkit will help so I feel very confident.
- Rodriguez – More confident than I was.
- Michael – I learned a lot from the material.
- David – I feel great, especially after reading the material.
- Fred – I feel more confident.
- Robert – I feel more confident.

Comments reported by patients who shared the educational materials with someone else how that process has helped their progress?

- Christopher – Yes, I shared with my co-workers and we’ve been having healthy lunches.
- Rodriguez – I will share it with family and peers. I believe this will shed light on blood pressure and cholesterol.
- Mario – Yes, my father is a smoker who suffers from high blood pressure.
- Nate – Yes, guys at work. We’ve all started looking out for each other.
- Marlon – Yes, my wife who also has high blood pressure.
- Lee – Yes, my wife so we can hold each other accountable.
- David – Yes, my sister because she’s a diabetic.
- Robert – Yes, my wife and I told my friends to stop eating fast food.
- Patient 4 – I took it to work and they are reading it.
- Patient 5 – My wife so we can do it together to stay healthy.
- Patient 6 – Yes, my wife. She’s getting her numbers checked now too.
- Byron – Yes, my wife who was recently diagnosed as a pre-diabetic so it’s helping both of us.
- Leroy – Yes, with my wife. It helps to have her on the same page as me.

Patients reported following different strategies to reduce their risk for high blood pressure and high cholesterol. Those interventions include changing their eating habits, reducing salt and fat intake as well as increasing their exercise and physical activities in any form they are able to. Patients stated that they are working to quit smoking, reduce the amount of alcohol they consume, working to reduce stress levels in their personal lives and are paying closer attention to their prescribed medications.

Patients reported the following differences in their health since their last visit when the “Check. It. Change It. Control It.” materials were first introduced to them:

- Oliver – I’ve lost 18 pounds in the past month.
- Stacey – I’ve lost 15 pounds since the first “Check It. Change It. Control It.” survey.
- Gregory – I’m watching my amount of cigarettes each day.
- Richard – I lost some weight and I’m less irritated.
- Patient 7 – My heart rate and blood pressure improved.
- Patient 8 – I decreased my blood pressure and cholesterol.
- Anthony – I have more “pep” in my step.
- Michael – More energized.
- Ielon – I feel better and it made me more aware of my health risks.

Overview Practice Team Survey Results (Complete survey report attached)

Nine practices completed the survey; 18 individuals responded.

27%: The average number of African-American male patients in the participating pilot practices.

44%: The percent of African-American male patients in the participating pilot practices who have high blood pressure or high cholesterol

Sample of comments shared by practice team members regarding their experience using the patient education materials with their patients:

- The materials were good but there was a little too much of them. It was hard to fit a review of that many materials into a visit. Shorter talking points and a pocket-sized record as an option might help.
- Patients were receptive and willing to learn. They appreciated the material, though it could have been simplified some to make it less overwhelming.
- 2 – 1 % refused. Most patients appreciated the information. Most stated they knew the risks were higher for African-American men.
- It was a good experience. My patients seemed to welcome the materials and the opportunity to dialogue on the topic of hypertension and high cholesterol.
- Patients were receptive to “check it”, however limited in examples of how to implement “change it.”
- Educate staff to take the lead with patient selection, survey questions, and follow-up by phone.
- Most discussions revolved around dietary, blood sugar controls, and medication compliance.

Sample of best practices or challenges discovered during the course of the pilot period:

- Some men are really in denial.
- Challenges were trying to figure out key points without reading the whole packet to the patient.
- A challenge was the post-survey and getting feedback from some patients because some come in every 3-6 months. We tried contacting them by phone and email and will continue to do so.
- Behavioral changes are harder for males; male patients don’t see a doctor as much as female patients, hard for them to understand how salt affects blood pressure.
- Making the patient aware of their blood pressure and cholesterol numbers rather than just saying their blood pressure is fine or cholesterol is fine.
- Few challenges. The survey sparked the discussions. The “best practice” was the material and the reward cards (but even after we ran out of the cards the discussions were the same and they did the surveys).
- Providing opportunities to provide healthy eating (i.e. demonstrations).
- The patients that knew their BP numbers were also receptive to the process of controlling it.

100%: The percent of practices that have a way to download patient education materials electronically.

66% of practices would be willing to print these materials at their own expense; 22% are unsure; 22% would not be willing to reproduce the materials at their own expense.

11 out of 18 practice team members thought the materials were a helpful tool in discussing high cholesterol and hypertension with their patients.

Physician comments regarding the materials’ helpfulness in recommending culturally sensitive communication strategies:

- Yes, beautiful photography, factually and compassionately presented.
- I think that in the future I will see if these men take recommendations more seriously. It is too soon to know.
- Yes. Discussing statistical data with my African-American male patients was helpful in getting my patients to understand cultural distinctions in disease risk.

- I would sit rather than stand and listen rather than speak. This strategy was helpful to establish a better patient doctor relationship.
- Yes, somewhat, but may have applied to any culture. “Respect” was the bottom line message.
- African-American male perception of portion control differs between the U.S. guidelines.
- Yes, emphasis on truth, respect, individualized treatment.
- Four physicians were unsure and two commented that the materials were not helpful in recommending culturally sensitive communication strategies.

Additional practice team comments:

- It was more time consuming than I expected and more time consuming than most practices would be willing to do. Getting it down to fewer handouts would help.
- The material was too busy, redundant, and bulky. It would be good to consolidate and simplify somewhat. Otherwise, excellent.
- We need more programs like this to reach all African-American patients about HTN and cholesterol.
- Great project. Good outcomes. Great communications tool to use in a “real world” clinical practice.
- What is the next step? Will there be a focused intervention?

Challenges in practice commitment: The Christ Hospital Family Medicine Center - Mt Auburn, one of the ten original pilot practices dropped out of the project due to a lack of patient engagement. OAFP staff was notified that the practice was withdrawing from the pilot one week before the close of the project. A suitable replacement practice could not be inserted into the pilot project due to the tight time parameters of the project’s deadline.

The other problem that occurred was with Promedica Toledo Hospital Family Medicine Residency when it was discovered through comments made on the Practice Team Survey that none of the materials were used as designed by the pilot requirements. After further clarification with the physician champion at the residency program, it was understood that six residents within one practice location were tasked with this project and although the residents were trained appropriately by their faculty advisor, the residents did not understand their practice’s protocols and therefore they did not use the materials regularly or in some cases, none at all. The program realized the communication disconnect between faculty and residents after the project had concluded and the surveys had been submitted for tabulation. The residency faculty advisor was apologetic, agreed to use the materials with her new class of residents and offered several solutions she intends to instill if the residency is selected for a second round of piloting.

Next Steps

Upon the pilot’s completion, ODH and OAFP will analyze the patient and practice survey results, make any additional modifications to the toolkit that are necessary based on patient and physician feedback, and disseminate the toolkit statewide through several methods:

- A copy of the toolkit will be mailed to every OAFP member (more than 4,000 practicing physicians, and residents) with the fall 2013 issue of OAFP’s quarterly magazine, *The Ohio Family Physician*.
- OAFP is developing a website and converting the toolkit materials to electronic form so practices may upload them to their electronic medical record (EMR) system and easily print materials for their patients.

Take Note

ASTHO (Association of State and Territorial Health Officials) received a grant from the CDC (Centers for Disease Control) to collect case stories about ways states are integrating public health and healthcare to meet the goal of the Million Hearts initiative. “The Check It. Change It. Control It.” collaboration project is featured on ASTHOS’s website. These case studies will also serve as a basis for developing a set of key recommendations for state, local, territorial, and tribal health agencies to implement Million Hearts and will also support the President’s Challenge of collecting at least one story from every state on integration.

In addition, ASTHO is planning a webinar in collaboration with the National Association of Chronic Disease Directors (NACDD) and the American Heart Association (AHA) that will feature Ohio's "Check It. Change It. Control It." project. The webinar is titled "Million Hearts Engagement at the State Level" and will target ASTHO and NACDD members/audiences to provide information about how these groups can engage with the broader Million Hearts initiative, provide examples of state successes, and share information about what resources are available. The webinar will be held on August 20 at 3:00 p.m. EST. ODH and/or OAFP representatives will present on our collaborative project.

Resources cited:

1. Federation of American Societies for Experimental Biology (2010, April 26). Predicting risk for high blood pressure: Factors of hormone metabolism that may make African-Americans more susceptible. *ScienceDaily*. Retrieved September 20, 2012, from <http://www.sciencedaily.com/releases/2010/04/100426113102.htm>. (Based on research by Dr. TanYa Gwathmey, Hypertension and Vascular Research Center of Wake Forest University Baptist Medical Center, and presented at this meeting under the title "Sex and Racial Background Influence Angiotensin Peptide Metabolism in Young Adults.")
2. *American Journal of Hypertension* 22, 1303-1308 (December 2009) | doi:10.1038/ajh.2009.167
Aldosterone Contributes to Blood Pressure Variance and to Likelihood of Hypertension in Normal-Weight and Overweight African Americans, Srividya Kidambi, Jane M. Kotchen, Shanthi Krishnaswami, Clarence E. Grim and Theodore A. Kotchen.
3. American Physiological Society (2008, November 25). Hypertension Develops Early, Silently, In African-American Men. *ScienceDaily*. Retrieved September 20, 2012, from <http://www.sciencedaily.com/releases/2008/11/081117082046.htm> (Report based on "Racial differences in central blood pressure and vascular function in young men," research carried out by Kevin S. Heffernan, Sae Young Jae, Kenneth R. Wilund, Jeffrey A. Woods and Bo Fernhall, at the University of Illinois, Urbana-Champaign. The study appears online in the *American Journal of Physiology-Heart and Circulatory Physiology*, published by The American Physiological Society.)