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CASE STUDY

Utilizing Lay and Clinical Community Health Workers to Address Untreated Hypertension: The University of Rochester Medical Center's HEART Initiative

National Center for Chronic Disease Prevention and Health Promotion
Division of Community Health

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Introduction and Background

Introduction

Health Engagement and Action for Rochester's Transformation (HEART) is an initiative spearheaded by the University of Rochester Medical Center's (URMC) Center for Community Health to improve the health of all residents of Monroe County, with a special focus on underserved populations, particularly residents of the "Crescent of Poverty," five of Rochester's most underserved neighborhoods. One of HEART's primary clinical and community preventive service activities is its Blood Pressure Ambassador and Advocate program. The program is intended to increase access to and utilization of services to detect and treat hypertension (high blood pressure) by focusing on coordination between community-level outreach and prevention activities and clinic-based cardiovascular disease prevention and treatment. The three main goals of HEART's blood pressure initiative are:

- Increase residents' awareness and understanding of hypertension and its impact on health and risk status.
- Encourage residents to check their blood pressure.
- Motivate and facilitate those individuals identified as hypertensive to take steps to control their blood pressure by using available clinical and community resources.

To achieve these goals, HEART trained and utilized lay community health workers ("Blood Pressure Ambassadors") and clinical community health workers ("Blood Pressure Advocates") to address untreated hypertension. Their job is to help individuals with hypertension control their blood pressure by making lifestyle changes—such as increasing exercise or quitting smoking—and by increasing their access to care (through navigation services, such as transportation facilitation) and adherence to treatment plans.

This case study describes the role of lay and clinical community health workers—HEART's Ambassadors and Advocates—in identifying patients with hypertension and helping them access individualized care services. The case study provides background information on HEART and briefly summarizes the rationale for addressing the issue of hypertension. It also describes how HEART works in community and clinical settings to address health disparities. The study concludes with key outcomes, lessons learned, next steps, and a list of helpful resources.

Background

URMC's Center for Community Health manages HEART and has the stated mission to reduce health disparities in the community and improve the health of residents through research, education, and service outreach programs. When it launched in 2011, HEART enlisted a number of partners, including the local Department of Public Health, the Finger Lakes Health Systems Agency, and the Rochester Business Alliance/Finger Lakes Health Systems Agency (RBA/FLHSA) Community High Blood Pressure Collaborative. Together, they created two types of community health worker programs—Blood Pressure Ambassadors and Blood Pressure Advocates.

1. Blood Pressure Ambassadors are volunteer community health workers who link residents with educational resources and self-assessment tools to check and monitor their blood pressure. Some Ambassadors perform blood pressure screenings.
2. Blood Pressure Advocates are employees of URMC who provide clinical management and guidance to patients in neighborhood health clinics to manage their hypertension.

In the community, HEART took a two-step approach to launch its Blood Pressure Ambassador program. First, they increased the number of community sites where residents can check their blood pressure by installing automated blood pressure monitoring kiosks in various locations and training Ambassadors to take blood pressure measurements. Next, they trained the Ambassadors to link residents to URMC's hypertension clinics and to cardiovascular health resources (including the kiosks) where residents can continue to check their blood pressure in their community.

In clinics, Blood Pressure Advocates first worked to educate physicians about their services, and to encourage them to explain the program to their patients. Once physicians' buy-in was obtained, the Advocates began to meet with patients to connect them with services and individualized education.

With these two programs, the HEART initiative aims to create and implement environmental and systems changes to improve opportunities for residents to control hypertension.

Description of the Issue and the HEART Blood Pressure Initiative

Hypertension affects an estimated one in three Americans, increasing their risk for heart disease and stroke. Heart disease is the leading cause of death in the United States.[1,2] HEART incorporates several community strategies to help residents—particularly low-income individuals and families—understand hypertension and the role that lifestyle plays in the condition.

Community Engagement and Recruitment

HEART partnered with the Finger Lakes Health System Agency to provide interested groups, such as churches, clubs, and various community organizations with an eight-week educational program on high blood pressure. The program's curriculum includes an explanation of high blood pressure, suggested lifestyle changes, and other methods for controlling hypertension.

HEART then recruited people who completed the educational program to become volunteer Blood Pressure Ambassadors by offering them specialized training. The Ambassador training provides instruction on how to:

- Use blood pressure equipment.
- Speak with community members about blood pressure.
- Administer a blood pressure screening tool.

HEART identifies three levels of Ambassadors. They all must successfully complete the eight-week high blood pressure curriculum and the Blood Pressure Ambassador training. The three levels of Ambassadors are distinguished by the volunteers' qualifications.

1. *Level 1 Ambassadors* are lay members of the community. These volunteers host blood pressure booths at community health events, conduct blood pressure readings at their local church or community group, and educate residents about high blood pressure.
2. *Level 2 Ambassadors* are community health educators. They conduct blood pressure assessments in kiosks located in businesses, such as salons or barber shops, on a regular schedule. These volunteers receive ongoing support and professional development from Blood Pressure Ambassador trainers who make quarterly visits.
3. *Level 3 Ambassadors* are clinically-trained nursing, medical, and vocational students. They provide blood pressure education, conduct hypertension screenings, and deliver presentations in the community about blood pressure control. They may also conduct physician outreach to expand the program.

Ambassadors are required to participate in at least one community event per year to stay in the program. All Ambassadors encourage community members to get their blood pressure checked, and if it is abnormal, to follow up with their primary care provider. In addition to conducting blood pressure screenings, the Ambassadors refer residents to blood pressure-reading kiosks (funded by the RBA/FLHSA Community High Blood Pressure Collaborative) that are located throughout Monroe County. A number of kiosks are located in Crescent neighborhoods, due to the prevalence of hypertension in this underserved area. Many Crescent residents are uninsured or underinsured.

HEART Ambassadors work to increase residents' awareness of health risks resulting from high blood pressure, and increase the number of residents who know their blood pressure and access resources to control hypertension. HEART Ambassadors also work to empower community members to ask questions about and become engaged in their overall health care, with a focus on understanding and taking ownership of their blood pressure management.

Clinical Engagement

When individuals are referred to URMC's hypertension clinics by their primary care physician because of their blood pressure status, they are connected with the Blood Pressure Advocates program, and meet with Advocates at the clinic site. Physicians provide information about the Blood Pressure Advocate program to patients, and patients frequently schedule a meeting with an Advocate during the same visit. As a result of these efforts, the number of clinical referrals to the Advocates increased 400%. Advocates help patients with hypertension control their blood pressure by providing education, solutions, assistance in setting goals, and support.

Unlike the Ambassadors, who are volunteers, Advocates are paid clinical staff of URMC who also serve a community health worker role; however, their service is offered free of charge to patients. They are able to leverage community resources to help patients develop a chronic disease self-management plan that

focuses on hypertension management. URMC provides monthly professional development activities to support Advocates and strengthen their clinical and patient relations skills

As an additional form of outreach, Advocates offer primary care providers information on health disparities that may exist within their patient population, and how to communicate effectively with patients who have challenges with health literacy. Most advocates also have access to patient electronic medical records and use them to enter information and communicate with physicians.

Addressing Health Equity

The Ambassador program focuses on a geographical area known as the Crescent of Poverty, which represents the most vulnerable residents of Rochester. The Crescent area population consists of mostly African American and Hispanic residents who have low socioeconomic status and are susceptible to increased health disparities compared with other populations in Rochester. Both the clinic-based Advocate program and the community Ambassador program were developed to address health disparities in areas of Rochester like the Crescent.

Although the ambassador program is focused on increasing awareness of high blood pressure at the community level, it also works to improve access to health services for disadvantaged residents of Rochester. Ambassadors provide Crescent residents with information about how to become more informed patients by asking the right questions and gaining awareness of available resources. Ambassadors also offer residents assistance in navigating the insurance and health systems. In addition, HEART provides training to participating physicians, practices, and hospital groups about improving communication with their patients.

Lack of access to transportation is a major challenge for Crescent residents. Advocates link residents lacking transportation to the local MediCab service for rides to clinic appointments and pharmacies. By addressing the transportation barrier, Advocates improve patient adherence to treatment.

Data Collection and Key Outcomes

As of 2013, HEART has collected preliminary process and outcome evaluation data. The primary method of measuring the progress of their efforts is through a review of process data collected by HEART on the number of Ambassadors and Advocates trained, the numbers of trainings held, and the numbers and types of community events where Ambassadors performed community outreach.

From 2011-2013, nearly 200 people, including lay members of the community, business owners, and clinicians were trained as Ambassadors in Monroe County. Their work was supported by community clinics and the provision of more than 100 kiosks to provide blood pressure checks. Nearly 650 patients participated in the HEART program.

Limited outcome data have been collected by URMC's High Blood Pressure Registry, which tracks residents diagnosed with hypertension in clinics and in the community. Residents are entered into the

registry if they have been diagnosed with hypertension (defined as three or more blood pressure readings above 140/90 mmHg). These blood pressure readings are taken at community events by Ambassadors, at community kiosks, and in medical facilities.

The number of Monroe County residents included in the High Blood Pressure Registry has increased from 56,000 to more than 100,000. The High Blood Pressure Collaborative projects that by 2016, 75% of the individuals on the list will have their blood pressure under control. By the middle of 2013, approximately 65% of registrants had their blood pressure under control, just shy of the 75% goal. The initiative also measures success by the number of patients whose blood pressure declines (even if not to a non-hypertensive level) as a result of participation in the program.

Lessons Learned

HEART has (1) strategically utilized community partnerships to extend its reach to individuals in need and (2) trained clinical staff to reduce barriers that residents with hypertension face in accessing preventive and clinical health services. Integrating the Advocates into the clinical setting has helped connect patients with high blood pressure to valuable community services.

The Ambassador program has experienced some challenges in retaining Ambassadors, who are all volunteers. In response, HEART will increase the number of blood pressure monitoring kiosks throughout the community as a way to provide blood pressure monitoring on demand.

Looking ahead, HEART is working to involve leaders of the faith community in the Ambassador program to reach additional residents with high blood pressure. Initial efforts working with the faith community have demonstrated the importance of recruiting volunteers who are actively engaged and well known in their congregations in addition to faith leaders. A subcommittee of the High Blood Pressure Collaborative is working to forge more partnerships with faith organizations to expand the project's reach. The collaborative recruited members from 20 congregations to participate in the Ambassador training and the HEART initiative.

HEART trains its Ambassadors to go out into the community to educate others about high blood pressure and how to access services through the HEART initiative. This training approach has proven to be a successful way to reach a diverse set of residents across the Rochester and Crescent communities.

Next Steps

URMC and its partners plan to evaluate the effectiveness of HEART in reducing the prevalence of high blood pressure and other chronic conditions among residents.

The Ambassador program continues to work to increase venues where individuals can track their blood pressure and to improve access to treatment for hypertension in underserved communities. Ambassadors will continue to screen residents for hypertension and disseminate information about prevention and control of high blood pressure.

HEART also plans to expand its navigation assistance services: in addition to providing access to the local MediCab transport option, HEARTs' clinical Advocates offers bus passes to residents who are unable to secure transportation to see their Advocate and/or physician. A planned pilot program will provide selected patients with blood pressure cuffs and 30-day self-monitoring journals to capture information about such factors as their blood pressure, diet, physical activity, medication adherence, and tobacco use. Participating patients will review their journals with Advocates during their clinic visits and use them as another blood pressure management tool.

Conclusion

URMC's HEART initiative is an innovative way to empower individuals from the community to learn about the risks and treatment of high blood pressure, and to share their knowledge with other community members. Initial observations by program staff indicate that the program is acceptable to organizations in the target communities, as measured by the growing numbers of groups participating in trainings.

HEART appears to be an effective way to identify individuals in underserved communities with hypertension, as demonstrated by the significant increase in the number of people enrolled in its High Blood Pressure Registry. The HEART initiative may also be playing a role in controlling participants' blood pressure; while 100% of individuals in the Registry had high blood pressure at the time they were registered, 65% had their blood pressure controlled at the time of writing.

Further evaluation will be needed to determine how HEART Ambassadors and Advocates, together with various other efforts, are working to reduce and control blood pressure among Registry members.

Resources

- Blood Pressure Advocate Program, University of Rochester Medical Center, Center for Community Health.
- Eat Well, Live Well for Healthy Blood Pressure, Finger Lakes Health Systems Agency and Rochester Business Alliance website.
- Know Your Numbers—Kiosk Locations, Finger Lakes Health Systems Agency and Rochester Business Alliance website.
- Million Hearts Initiative, U.S. Department of Health and Human Services.
- Addressing Chronic Disease through Community Health Workers: A Policy and Systems-level Approach, Centers for Disease Control and Prevention.
- Promoting Policy and Systems Change to Expand Employment of Community Health Workers, Centers for Disease Control and Prevention.
- Community Health Workers in Diabetes Management and Prevention, American Association of Diabetes Educators Position Statement.
- With Every Heartbeat Is Life: A Community Health Worker's Manual for African Americans, National Institutes of Health, National Heart, Lung, and Blood Institute.

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2. Heron M. Deaths: Leading Causes for 2010. *Natl Vital Stat Rep*. 2013;62(6):1-96. http://www.cdc.gov/nchs/data/nvsr/nvsr62/nvsr62_06.pdf. Accessed June 3, 2015.

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Corporate Headquarters
9300 Lee Highway
Fairfax, Virginia 22031
Phone: (703) 934-3000
Fax: (703) 934-3740

Atlanta Office
3 Corporate Square NE, Suite 370
Atlanta, Georgia 30329
Phone: (404) 321-3211
Fax: (404) 321-3688

www.icfi.com