



WISEWOMAN

March 2022

Self-Measured Blood Pressure (SMBP) Monitoring: A BETTER Formula for Hypertension Control



WISEWOMAN™

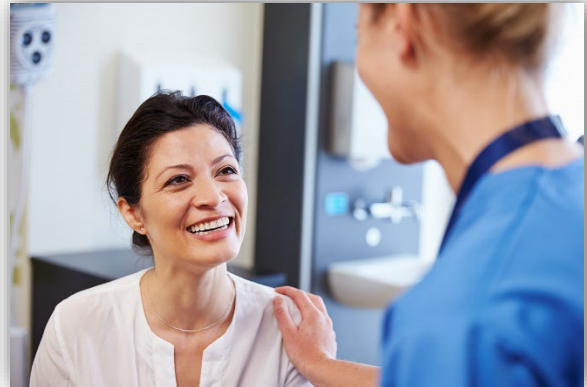
Well-Integrated Screening and Evaluation
for WOMen Across the Nation

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Introduction

The WISEWOMAN (Well-Integrated Screening and Evaluation for WOMen Across the Nation) program was created to help women understand and reduce their risk for heart disease and stroke by providing services to promote lasting heart-healthy lifestyles. Working with low-income, uninsured and underinsured women aged 40 to 64 years, the program provides heart disease and stroke risk factor screenings and services that promote healthy behaviors. The WISEWOMAN program is currently administered through CDC's [Division for Heart Disease and Stroke Prevention \(DHDSP\)](#) and is operated on a state-by-state basis. Services provided by each WISEWOMAN program vary, but all are designed to promote lifelong heart-healthy lifestyle changes.

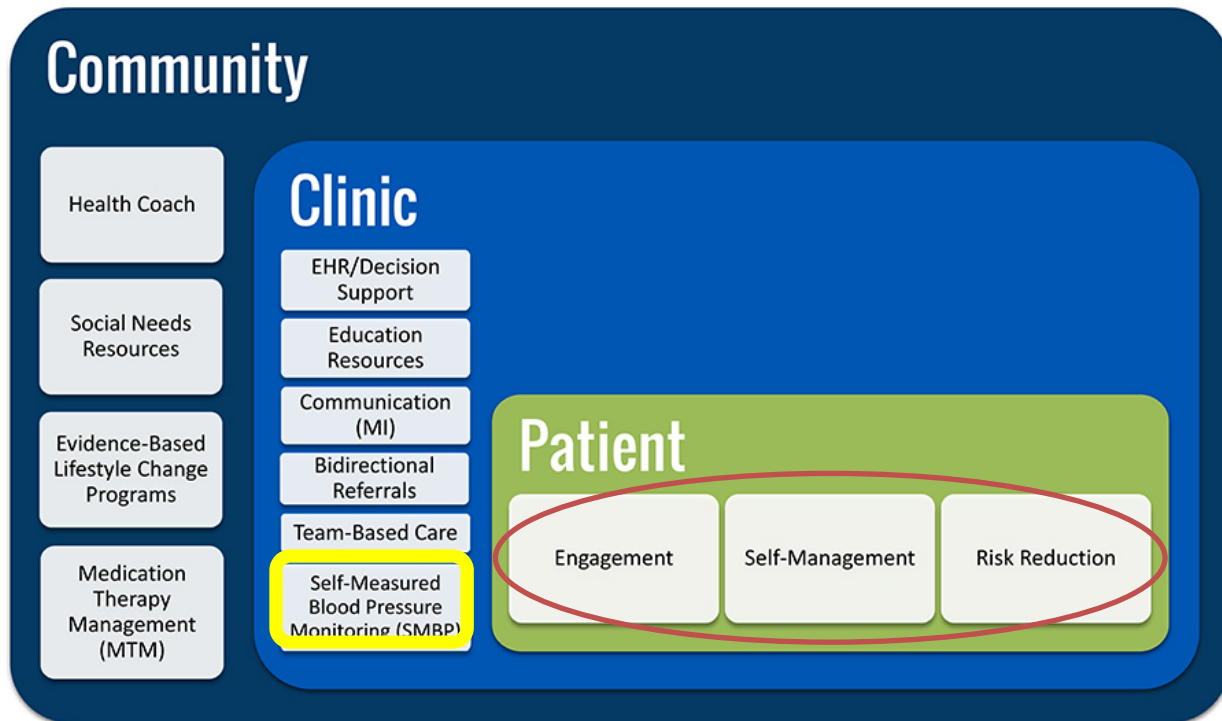


Strategies to achieve WISEWOMAN goals include tracking and monitoring clinical measures to improve healthcare quality and identifying patients with hypertension; promoting team-based care to reduce cardiovascular risk; and developing clinic/community links to support evidence-based lifestyle change for at-risk women. The long-term outcomes are increased blood pressure control and improved detection, prevention, and control of cardiovascular disease.

Purpose of Module

This module will focus on hypertension, especially among the WISEWOMAN population. It will examine health equity in general and special risks for Hispanic/Latino persons. The supporting evidence for self-measured blood pressure (SMBP) monitoring as an intervention to control blood pressure will be presented along with support for implementing a practice-based SMBP program and community-based resources.

WISEWOMAN Dimensions of Health



Hypertension and Health Disparities

Hypertension affects 47% of U.S. adults, and only 24% of people with known hypertension have the condition under control. Uncontrolled hypertension is a risk factor for heart disease and stroke, the leading causes of death in the U.S. (CDC, 2021).

Racial and ethnic health disparities continue to exist in the United States. Prevalence and control rates for hypertension vary by race and ethnicity. For example:

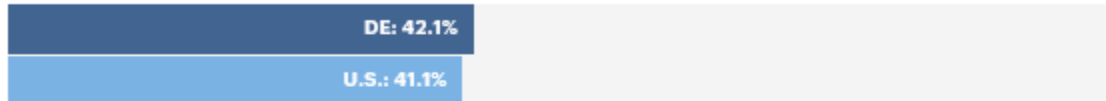
- Non-Hispanic blacks have significantly higher rates of hypertension compared to non-Hispanic whites.
- Hispanics and non-Hispanic Asians have lower prevalence than both groups.

WISEWOMAN Hispanic Population:

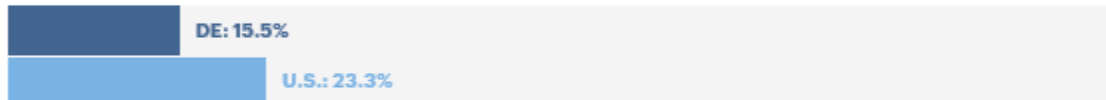
**Lower prevalence of hypertension overall
BUT
Higher rates of uncontrolled hypertension
compared to non-Hispanic whites**

RACE/ETHNICITY

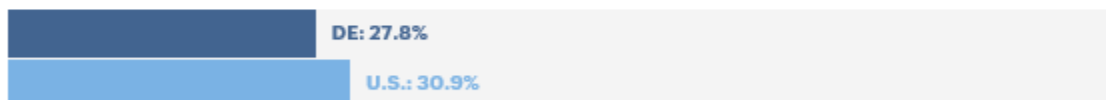
High Blood Pressure - Black



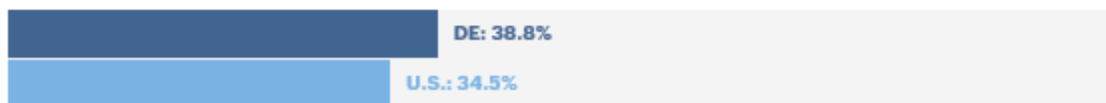
High Blood Pressure - Hispanic



High Blood Pressure - Multiracial



High Blood Pressure - White



Percentage of adults

Source: America's Health Rankings 2019.

<https://www.americashealthrankings.org/explore/annual/measure/Hypertension/state/DE>, 2019

A comprehensive understanding of the effects of racial, ethnic and other factors on risk for developing cardiovascular disease in the U.S. is not currently available because race, ethnicity, and socioeconomic data are not always collected. Saeed et al (2020) propose a need to disaggregate data to define high-risk populations. In addition, the current U.S. atherosclerotic cardiovascular disease risk calculator does not differentiate between various ethnicity-specific risk scores or between differential risks among Hispanic/Latino groups. Below is a snapshot of racial disparities in hypertension (Saeed et al, 2020):

Major Factors in Disparities	Reasons for Worse Outcomes	Future Directions for Improving Disparities in Ethnic Minorities
Genetic and social factors	Sub-optimal risk stratification tools	Novel/culturally specific treatment strategies
	Variable medication response and adherence	Advancing research efforts in ethnic data collection

Trends in Hispanic Health

Hispanics or Latinos are the largest racial/ethnic minority population in the United States. Leading causes of death for Hispanics are heart disease and cancer, similar to non-Hispanic whites (CDC, 2015). Since the Hispanic population is diverse rather than homogenous, health risks can vary by subgroup. For example, hypertension prevalence was highest for Dominicans (39.4%) compared to Puerto Ricans (32.2%) and Central/South Americans (27.5%) (CDC, 2015).

Risk profile also varies according to whether the individual was born in the U.S. or another country and according to insurance status, with foreign-born and uninsured or under-insured people at increased risk (CDC, 2015).

Social factors may play a role in Hispanic health. Among Hispanics living in the U.S.:

- About 1 in 3 has not completed high school
- About 1 in 4 lives below the poverty line
- About 1 in 3 does not speak English well

Focus on COVID-19

COVID-19 is known to pose an increased risk of infection, hospitalization and death for people of Hispanic or Latino origin (2021b):

Rate ratios compared to non-Hispanic white persons	Black or African American, Non-Hispanic persons	Hispanic or Latino persons
Cases	1.0x	1.6x
Hospitalization	2.6x	2.5x
Death	1.9x	2.1x

Race and ethnicity are risk markers for other underlying conditions that affect health, including socioeconomic status, access to health care, and exposure to the virus related to occupation such as frontline, essential, and critical infrastructure workers (CDC, 2021c).

CDC (2021c) notes that heart conditions such as heart failure, coronary artery disease, cardiomyopathies, and possibly hypertension can increase risk of severe illness or complications from COVID-19. In addition, a December 2021 article in *Circulation* reported significantly higher annual blood pressure increases from 2019-2020 compared to 2018-2019 (when there was no corresponding increase). Mean changes each month during the pandemic period ranged from 1.10 to 2.50 mm Hg for systolic blood pressure (SBP) and 0.14 to 0.53 mm Hg for diastolic blood pressure (DBP). The increases were seen for both men and women across age groups in a longitudinal study with over 454,000 participants from all fifty states. Larger increases were seen for both systolic and diastolic blood pressures among women (Laffin et al, 2021).

Focus on Hypertension

Lower prevalence of hypertension among Hispanics/Latinos compared to non-Hispanic whites and blacks appears to be an encouraging statistic. However, the lower prevalence is offset by higher rates of health risks and hypertension compared to degrees of illness or risk to those of non-Hispanic whites (CDC, 2015).

Hispanic Population Health Risks related to Cardiovascular Disease*:

- 23% more obesity (47.1% U.S.-born; 35.3% foreign-born)
- Higher prevalence of cigarette smoking (17.7% U.S. born; 36.3% foreign-born)
- **24% more poorly controlled blood pressure**

**Compared to non-Hispanic whites*

The high rate of uncontrolled hypertension places these patients at increased risk for heart attack, stroke, and death (U.S. HHS, 2020). In addition, hypertension is a leading cause of chronic kidney disease and kidney failure, the tenth leading cause of death among Hispanics (CDC, 2021).

Self-Measured Blood Pressure (SMBP) Monitoring

The national Million Hearts® initiative (2021) defines SMBP as the regular measurement of blood pressure by the patient outside the clinical setting, usually at home. SMBP requires the use of a home blood pressure measurement device by the patient to measure blood pressure at different points in time.

Focus on SMBP:

All WISEWOMAN participants receive a free validated home blood pressure monitor and American Heart Association training aid.

To address the problem of uncontrolled hypertension and its consequences, in 2020 Surgeon General Dr. Jerome Adams issued a “Call to Action to Control Hypertension.” The goals of the report were to prioritize hypertension control nationally, cultivate community support, and optimize patient care, including:

- Advance the use of standardized treatment approaches and guideline-recommended care.
- Promote the use of health care teams to manage hypertension.

- Empower and equip patients to use self-measured blood pressure monitoring and medication adherence strategies.

Multiple studies show that SMBP helps people with hypertension lower their blood pressure and improves access to care and quality of care for individuals. SMBP plus clinical support is recommended by the American College of Cardiology, American Heart Association, American Academy of Family Physicians, and other organizations. CDC (2017) recommends self-monitoring as a best-practice, cost-effective strategy for:

- Reducing hypertension
- Improving medication adherence
- Improving patient knowledge
- Improving the health system process by establishing protocols for home monitoring

The Agency for Healthcare Research and Quality (AHRQ, 2012) performed a systematic review to examine the comparative effectiveness and adherence predictors of blood pressure self-monitoring and determined that strong evidence supports self-measured blood pressure monitoring plus clinical support such as patient education and telephonic or web-based contacts for hypertension control. While self-monitoring alone versus usual care yielded a modest reduction in systolic blood pressure (SBP) and diastolic blood pressure (DBP) measurements, when the clinical support component was included, statistically significant net reductions in SBP and DBP were attained and sustained up to 12 months, based on consistent findings in high-quality studies.

Focus on Clinical Support:

When combined with clinical support, SMBP is demonstrated to statistically significantly reduce blood pressure for up to 12 months.

Clinical support can include individual counseling, web-based or telephone support, and educational classes provided by clinical staff or community programs.

SMBP: A BETTER Formula for Hypertension Control

SMBP is an accessible way to promote hypertension control among the WISEWOMAN population. The evidence for SMBP is convincing, but starting a program can be a challenge for practices. To that end, we offer a BETTER formula for SMBP with clinical support, with accompanying resources in Spanish and English:

- B** Blood pressure awareness
- E** Equip patients
- T** Technique training
- T** Track and record blood pressures
- E** Education @ home
- R** Refer to healthy behavior support services

B: Blood Pressure Awareness

Many people disregard their blood pressure, rationalizing that since they do not have symptoms, they are healthy. To engage patients, it is important to start by raising awareness about the consequences of uncontrolled hypertension, including heart disease, stroke, renal failure and more. The American Heart Association offers infographics with a clear message. Providers and care teams can use these resources as conversation guides to help people understand the importance of controlling hypertension.



<https://www.heart.org/-/media/Files/Health-Topics/High-Blood-Pressure/Consequences-of-High-Blood-Pressure-infographic.pdf>

<https://www.heart.org/-/media/Files/Health-Topics/High-Blood-Pressure/HBP-Consequences-Infographic-Spanish.pdf>

E: Equip Patients

WISEWOMAN participants receive at no cost a home blood pressure monitor. These devices are validated for home use by [ValidateBP.org](https://www.validatebp.org).

Ensure that the patient's blood pressure cuff is properly sized. People with larger arm circumferences may require a large-size cuff in order to get accurate measurements. Let the patient practice applying the cuff correctly in the office setting so she feels comfortable and confident before trying on her own at home. Ensure that patients understand how to assess their blood pressure and know how and when to communicate measurements to the office.

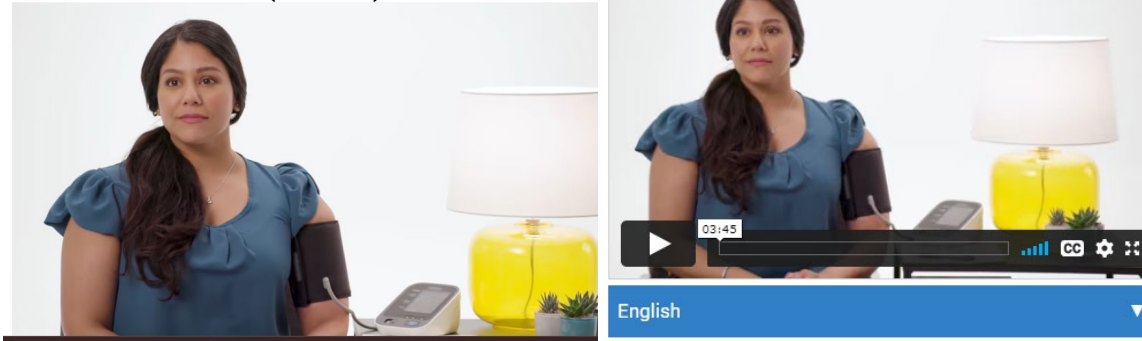


T: Technique Training

Health care professionals are so familiar with blood pressure measurement that it can be easy to forget that it is a new process to most patients. Teach patients best practices for taking their blood pressure so they can obtain accurate measurements that help them understand their own health and are meaningful to providers in developing treatment plans.

Target:BP™ is a national initiative formed by the American Heart Association and the American Medical Association in response to the high prevalence of uncontrolled blood pressure. Target:BP™ helps health care organizations, at no cost, improve blood pressure control rates through an evidence-based quality improvement program and recognizes organizations committed to improving blood pressure control. Target:BP™ offers SMBP training videos that can be used by care teams to teach patients proper blood pressure self-measurement techniques.

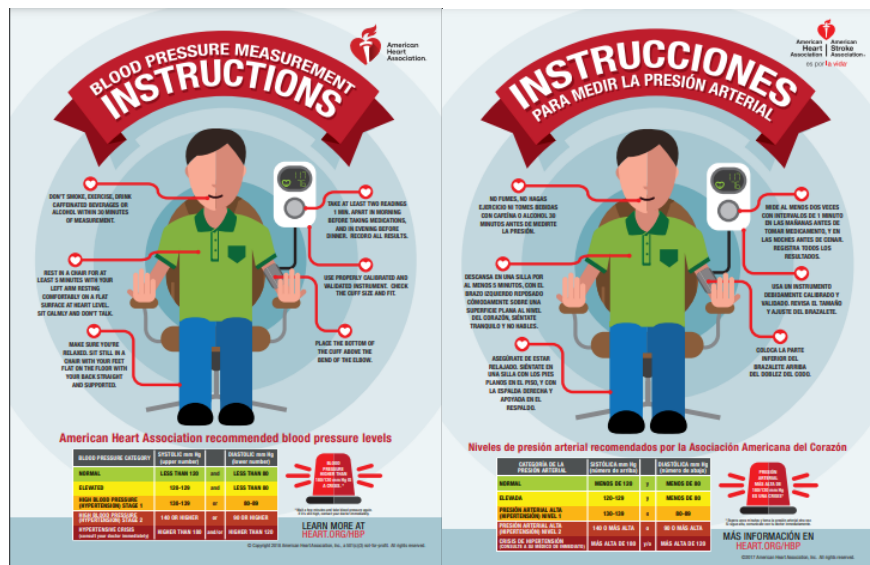
SMBP TRAINING VIDEO (SPANISH)



<https://targetbp.org/patient-measured-bp/implementing/smbp-training-patients/self-measured-blood-pressure-video-spanish/>

https://targetbp.org/tools_downloads/self-measured-blood-pressure-video/

Along with the validated upper arm home blood pressure monitor, WISEWOMAN participants receive the American Heart Association’s Blood Pressure Measurement Instructions. This infographic provides clear, step-by-step pictorial instructions to help patients remember the components of accurate self-measurement and how to interpret their blood pressure levels.








<https://www.heart.org/-/media/Files/Health-Topics/High-Blood-Pressure/How-To-Check-Blood-Pressure-Spanish-letter-size.pdf>

<https://www.heart.org/-/media/files/health-topics/high-blood-pressure/how-to-measure-your-blood-pressure-letter-size.pdf?la=en&hash=58005C0F0AC9C9AACAA3089070B54E0F74695E95>

T: Track and Record Blood Pressures


Tracking blood pressure over time and communicating measurements with the health care team is an important part of SMBP. WISEWOMAN provides convenient BP log books that patients can use to track trends and share measurements with providers. When providers are confident that the patient is measuring accurately and sharing valid data collected over time, the medical team and the patient can use the information to develop a treatment plan.


According to the American Heart Association, small changes can make a huge difference:


-  A 30-minute walk every day can drop your blood pressure (BP).
-  Follow the DASH Diet:
 - Lower sodium intake.
 - Eat nutrient-rich foods high in potassium, calcium, and magnesium.
-  Losing five to ten pounds can help lower your BP in overweight individuals.
-  Quit smoking. Smoking and second-hand smoke may contribute to high BP.
-  Every five points decrease in blood pressure reduces:
 - Risk of stroke by 34 percent
 - Risk of heart attack by 21 percent

Health Care Provider _____

Provider Phone _____

 DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health

 Quality Insights


 Million Hearts

Check out the many heart health resources from the Million Hearts® initiative at: www.millionhearts.org

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Blood Pressure Tracker

Your doctor wants you to take your **blood pressure medicine** before any lab test or office appointment.



<https://improve.qualityinsights.org/CMSPages/GetFile.aspx?guid=65b82c37-6a21-4eec-aa2f-e84143f6b82e>

E: Education @ Home

Quality Insights has created three short, patient-friendly videos available at no cost for practice or patient use. In addition to “Take High Blood Pressure Into Your Own Hands,” which reviews self-measurement techniques step-by-step, topics include understanding blood pressure and making healthy lifestyle changes. Practices can share these via patient portal, telehealth, or waiting/exam room videos, or provide the flyer so patients can view at home to reinforce the practice education.



Want to Learn How to Get Your Blood Pressure Under Control?

Watch this NEW Video Series for Hypertension Management Tips and Techniques to Make Control Your Goal

A new video series from Quality Insights features three short, easy-to-understand videos that will show you how to better manage your hypertension.

- **Small Steps to Big Improvements:** Walks you through small steps you can take to make a meaningful change in their blood pressure (<https://youtu.be/2Z7y8G9>)
- **Ready, Set, Go: A Roadtrip Through Hypertension:** Discusses blood pressure readings and their meaning in an engaging stoplight format (https://youtu.be/RNWW83_r8)
- **Take High Blood Pressure Into Your Own Hands:** Describes proper technique for self-management of blood pressure (<https://youtu.be/yvU00Wt1g>)

DELAWARE HEALTH AND SOCIAL SERVICES
Division of Public Health

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Small Steps to Big Improvements – [English](#) and [Spanish](#)
Ready, Set, Go: A Roadtrip Through Hypertension – [English](#) and [Spanish](#)
Take High Blood Pressure Into Your Own Hands - [English](#) and [Spanish](#)

R: Refer to Healthy Behavior Support Services

Providers are integral to an effective SMBP program--but you can't do it alone. Patients need help developing and maintaining healthy lifestyles as foundations for their health. WISEWOMAN recommends community-based resources for better health and hypertension management, including:

- Walk with Ease (available in Spanish)
- Healthy Heart Ambassador Blood Pressure Self-Management program
- Health Coaching (available in Spanish)
- National Diabetes Prevention Program (available in Spanish)
- The Delaware Quitline – tobacco cessation.

See the flyer for details.

Resources for Better Health and Hypertension Management

The following healthy behavioral support services are available as part of the WISEWOMAN (Well-Integrated Screening and Evaluation for Women Across the Nation) program. "The WISEWOMAN program was created to help women understand and reduce their risk for heart disease and stroke by providing services to promote lasting heart-healthy lifestyle." - CDC, 2020 <https://www.cdc.gov/wisewoman/index.htm>

Walk With Ease – Sponsored by the Arthritis Foundation, this program encourages you to add more physical activity to your daily routine. The self-directed program includes a walking schedule and a guidebook (available in Spanish). Walk With Ease website: www.arthritis.org/healthinesstools/healthylife/healthylife/walking/walk-with-ease

Healthy Heart Ambassador – Designed for people with high blood pressure, this program teaches participants how to manage their condition. It provides free education around healthy eating and physical activity and offers a free blood pressure monitor. View the flyer: <https://www.qualityinsights.org/CMSPages/GetFile.aspx?fileid=3660-4056-ae13-a75cd37568fd> for more information.

Health Coaching – The WISEWOMAN program offers free health coaching to participants. This service provides education and resources regarding physical activity, stress management and healthy eating.

Recursos para un mejor manejo de la salud y la hipertensión

Los siguientes servicios de apoyo para el comportamiento saludable están disponibles como parte del programa WISEWOMAN (Detección y evaluación bien integradas para mujeres en todo el país).

Cámbese con facilidad: patrocinado por la Fundación de Artritis (Arthritis Foundation), este programa lo alienta a agregar más actividad física a su rutina diaria. El programa auto dirigido, incluye un horario de caminatas y una guía (disponible en inglés y español). Sitio web Walk With Ease: www.arthritis.org/espanol/

Embajador de un corazón sano: diseñado para personas con presión arterial alta, este programa les enseña a los participantes cómo manejar su condición. Proporciona educación gratuita sobre alimentación saludable y actividad física y ofrece un monitor de presión arterial gratuito. Vea el folleto: <https://www.qualityinsights.org/CMSPages/GetFile.aspx?fileid=3660-4056-ae13-a75cd37568fd> para obtener más información.

Asesoramiento sobre salud: el programa WISEWOMAN ofrece asesoramiento sobre salud gratuito a los participantes. Este servicio brinda educación y recursos sobre actividad física, manejo del estrés y alimentación saludable.

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Call to Action

As a WISEWOMAN partner, you are demonstrating support for health improvement and disease prevention in the Hispanic population and beyond. SMBP is a demonstrated effective intervention for hypertension control, which is important to address especially in the Hispanic population where uncontrolled blood pressure is frequently seen. Providing monitors is a first step; evidence supports the critical addition of clinical support to help people attain long-term hypertension control. A practice-based SMBP program, based on the BETTER formula with patient-friendly resources, is a valuable component of chronic care management that can produce short- and long-term benefits. Quality Insights is here to assist you with development and implementation of SMBP. Contact us with any questions, to access resources, and ongoing assistance.

For more information, email Sarah Toborowski at stoborowski@qualityinsights.org or call 302-290-9049.

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