

# An Academic-Practice Partnership to Advance Million Hearts®

**Hood College**

**Department of Nursing**

**Frederick, MD**

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# Million Hearts<sup>®</sup> 2022

- **Aim:** Prevent 1 million—or more—heart attacks and strokes in the next 5 years
- National initiative co-led by:
  - Centers for Disease Control and Prevention (CDC)
  - Centers for Medicare & Medicaid Services (CMS)
- Partners across federal and state agencies and private organizations



# BY THE NUMBERS: Uncovering the Mysteries of the Heart

Years the Framingham Heart Study continues to break new ground on cardiovascular disease

70

By American Heart Association News



5,209

Initial volunteer participants

3

Generations who have participated in the study

15,447

Participants over the past 70 years



3,698

Published journal articles based on Framingham Heart Study data



1960

Year the study pinned cigarette smoking as a risk factor for heart disease

802

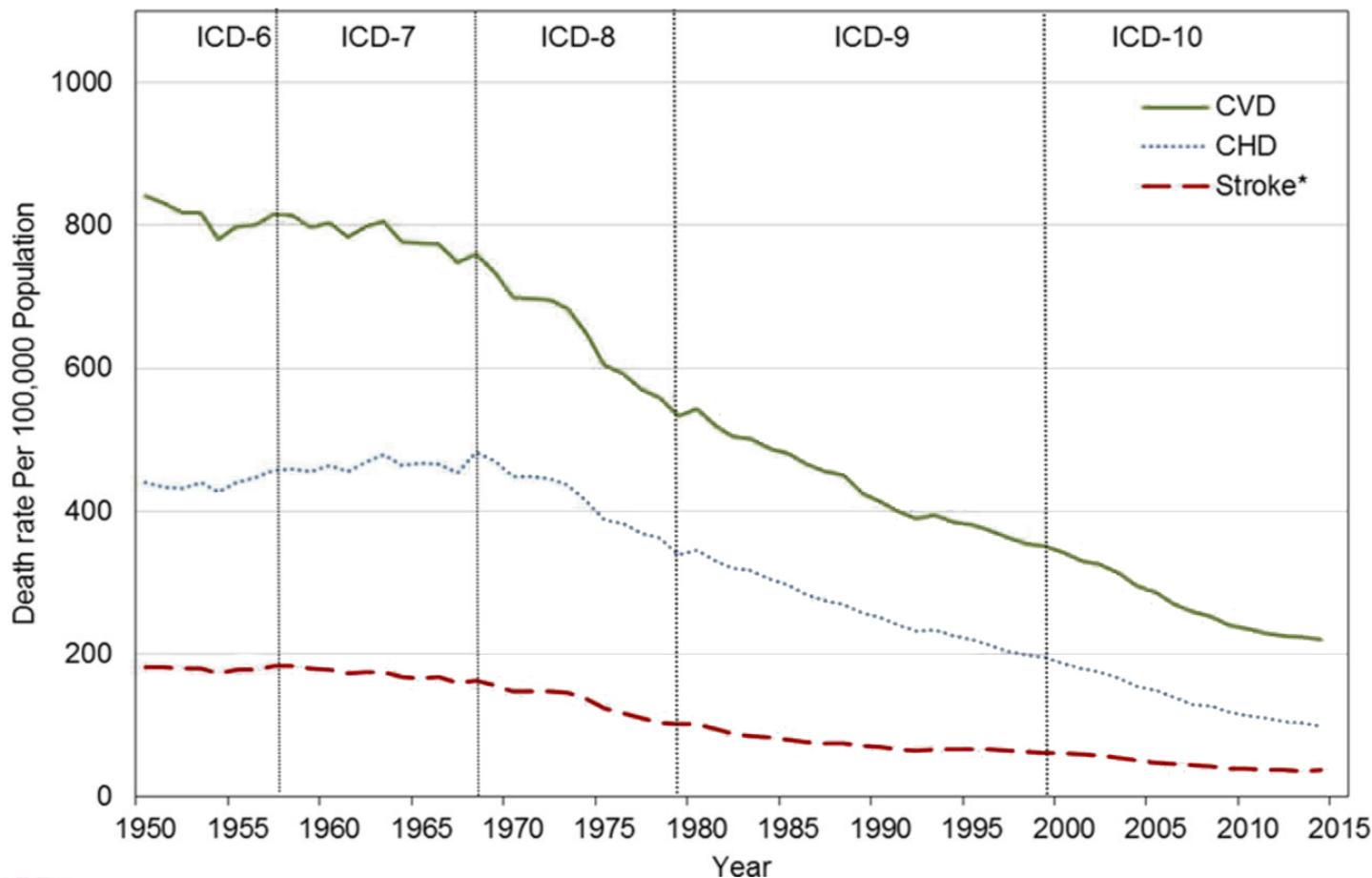
Participants who have donated or registered to donate their brain for further study



Sources: Framingham Heart Study, Boston University

Published Oct. 10, 2018

# Heart Disease and Stroke Trends 1950–2015



Mensah GA, Wei GS, Sorlie PD, Fine LJ, Rosenberg Y, Kaufmann PG, et al. Decline in cardiovascular mortality: possible causes and implications. *Circ Res* 2017;120:366–80.

# Heart Disease and Stroke in the U.S.

- More than **1.5 million** people in the U.S. suffer from heart attacks and strokes per year<sup>1</sup>
- More than **800,000** deaths per year in the U.S. from cardiovascular disease (CVD)<sup>1</sup>
- CVD costs the U.S. **hundreds of billions** of dollars per year<sup>1</sup>
- CVD is the greatest contributor to racial **disparities in life expectancy**<sup>2</sup>

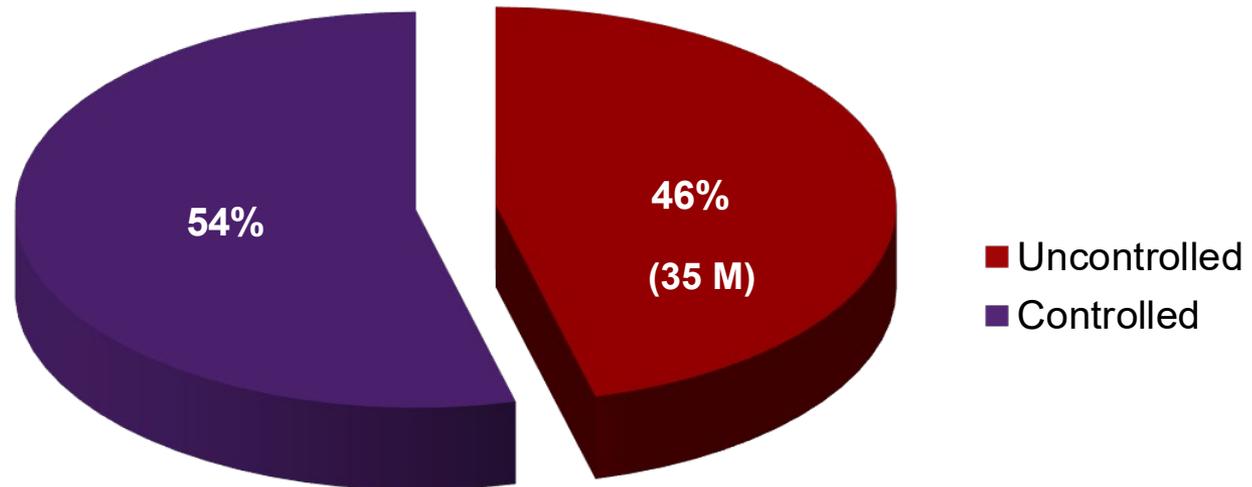


## References

1. Benjamin EJ, Blaha MJ, Chiuve SE, Cushman M, Das SR, Deo R, et al. Heart Disease and Stroke Statistics—2017 Update: A Report From the American Heart Association. *Circulation* 2017;135(10):e146–603.
2. Kochanek KD, Arias E, Anderson RN. How did cause of death contribute to racial differences in life expectancy in the United States in 2010? NCHS data brief, no. 125. Hyattsville, MD: National Center for Health Statistics. 2013.

# Only Half of Americans with Hypertension Have It Under Control

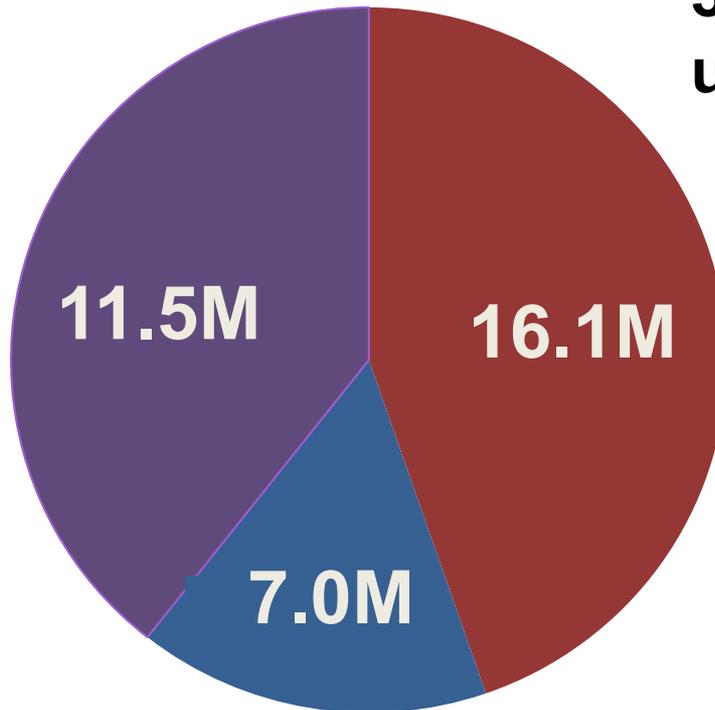
**75 MILLION**  
**ADULTS WITH HYPERTENSION (32%)**



SOURCE: National Health and Nutrition Examination Survey 2013-14.

# Uncontrolled HTN

**34.6M US Adults with uncontrolled HTN**

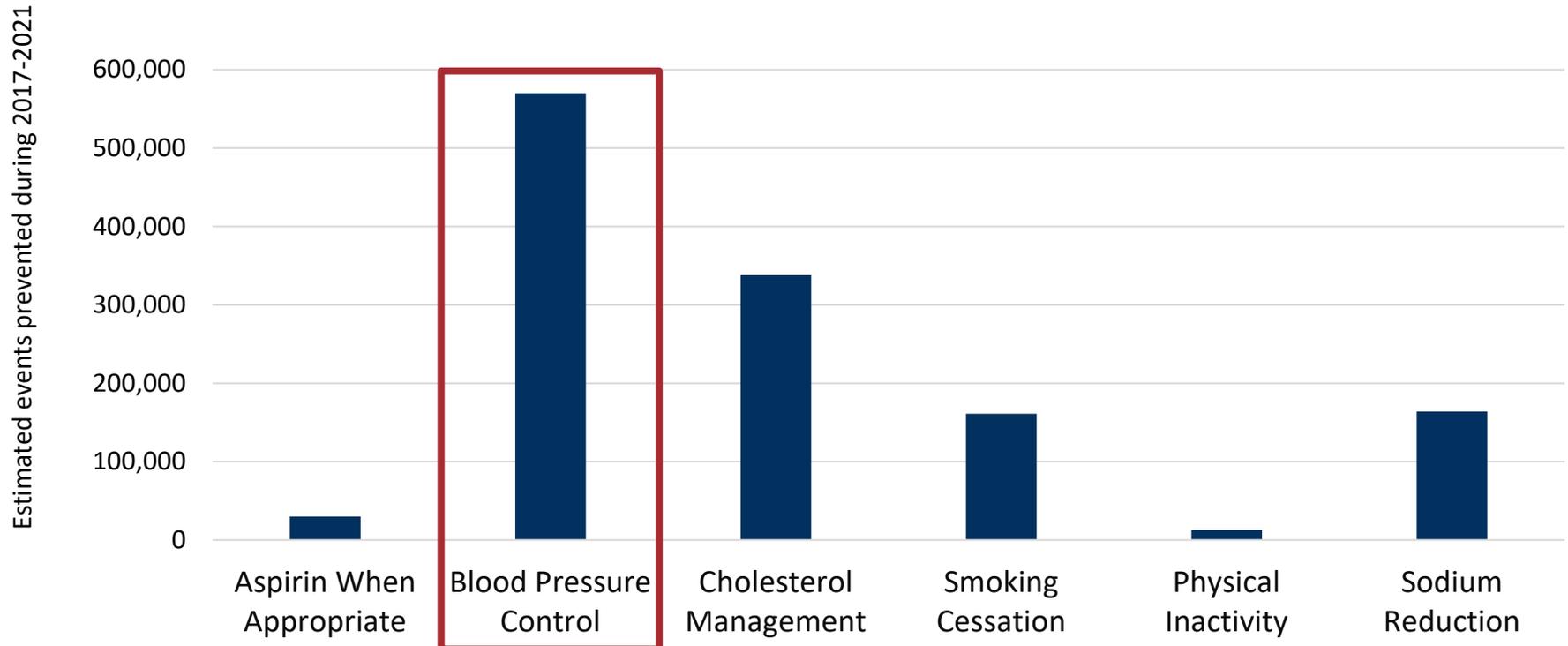


- Aware and treated
- Aware and untreated
- "Unaware"

Source: 2013-2014 National Health and Nutrition Examination Survey



# Contributions to “The Million”



<sup>1</sup>Reflects preliminary findings from simulation modeling conducted using the CVD Policy Model, ModelHealth: CVD, and PRISM (unpublished). Baseline risk factor data were determined for: aspirin when appropriate using 2013-14 NHANES; BP control and cholesterol management using 2011-14 NHANES; smoking cessation and physical inactivity using 2015 NHIS; and sodium reduction using 2011-12 NHANES.





*"I'm going to take your blood pressure, so try to relax and not think about what a high reading might mean for your chances of living a long, healthy life."*

# Million Hearts<sup>®</sup> 2022

*Aim: Prevent 1 Million Heart Attacks and Strokes in 5 Years*

Keeping People Healthy

Optimizing Care

COMMUNITY



Priority Populations

# Million Hearts<sup>®</sup> 2022

## *Priorities*

### Keeping People Healthy

Reduce Sodium Intake

Decrease Tobacco Use

Increase Physical Activity

### Optimizing Care

Improve ABCS\*

Increase Use of Cardiac Rehab

Engage Patients in  
Heart-Healthy Behaviors

### Improving Outcomes for Priority Populations

Blacks/African Americans with hypertension

35- to 64-year-olds

People who have had a heart attack or stroke

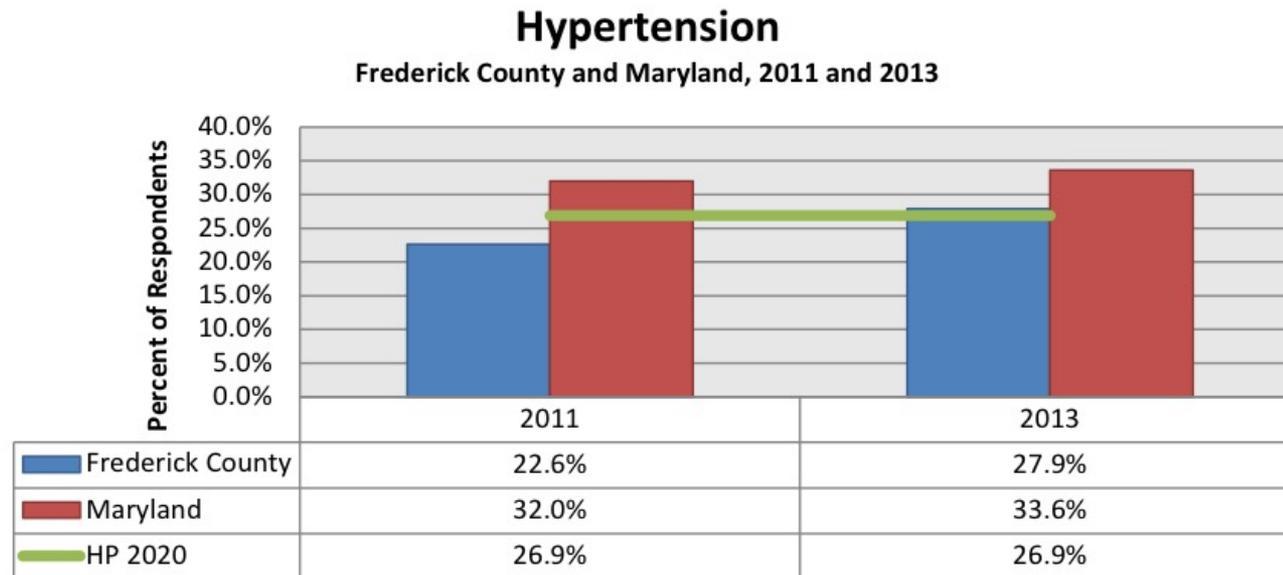
People with mental and/or substance use disorders



\*Aspirin use when appropriate, Blood pressure control, Cholesterol management, Smoking cessation

# ABCS in Frederick County, MD

- As of 2013, Frederick County does not meet the Healthy People 2020 Goal to reduce the proportion of the population with hypertension to 26.9% or lower.



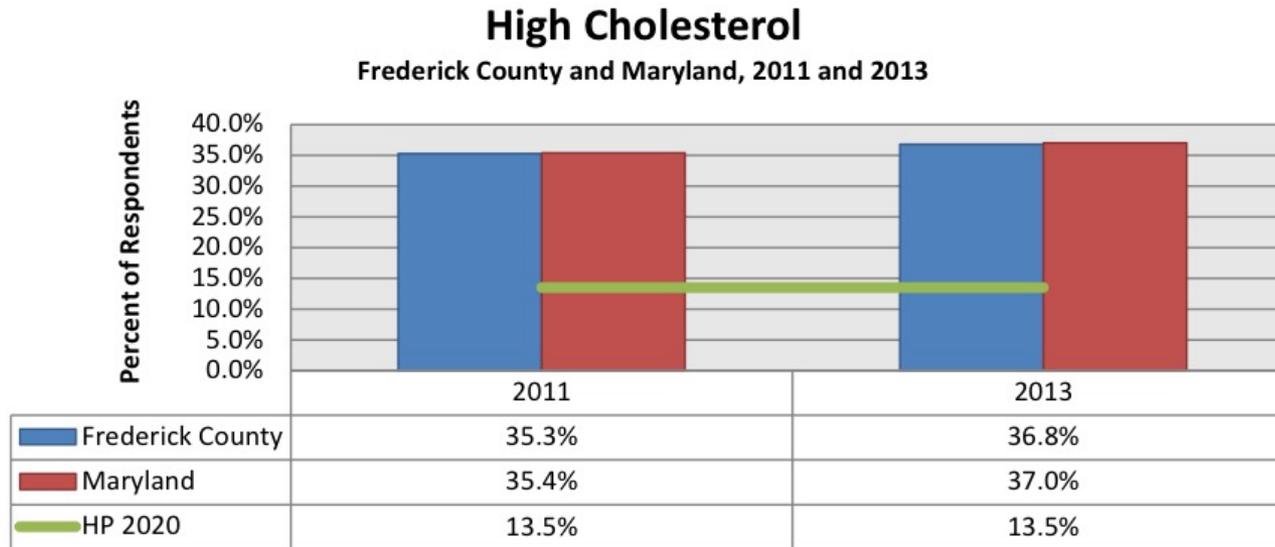
Source: BRFSS Data, Question: HYPERTENSION: EVER BEEN TOLD BY A HEALTH PROFESSIONAL THAT YOU HAVE HIGH BLOOD PRESSURE? Healthy People 2020 Goal HDS-5: Reduce the proportion of persons in the population with hypertension to 26.9%.



Source: Frederick County Community Health Assessment, 2016

# ABCS in Frederick County, MD

- Frederick County does not meet the Healthy People 2020 Goal to reduce the proportion of adults with high cholesterol to 13.5% or lower.



Source: BRFSS Data, Question: CHOLESTEROL: EVER BEEN TOLD BY A DOCTOR OR HEALTH PROFESSIONAL THAT YOUR BLOOD CHOLESTEROL IS HIGH? Healthy People 2020 Goal HDS-7: Reduce the proportion of adults with high total blood cholesterol levels to 13.5%.



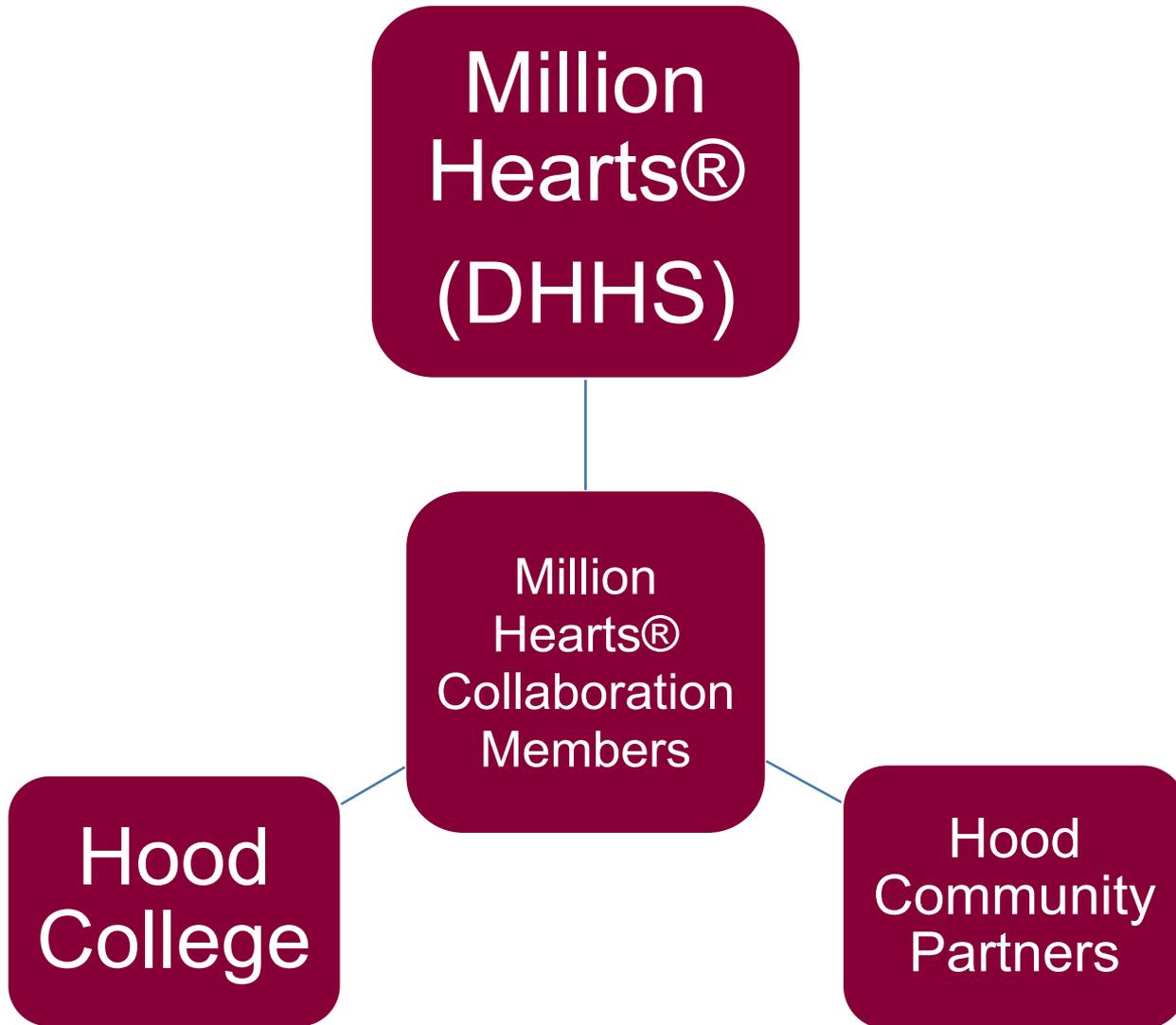
# January 15, 2019 Frederick News-Post

## ***County sets top health priorities for next three years.***

*“Frederick-area leaders from nonprofits, health care systems and the county health department spent Tuesday defining the most pressing health needs in the community for the next three years. After hours of presentations and discussion, **behavioral health, adverse childhood experiences (ACEs)/infant health, and chronic health** were picked as the top health concerns.”*



Source: Mongilio, H. (2019, January 15). *Frederick News-Post*.



# Hood College Million Hearts®



# Increasing APHN Commitment to Million Hearts® 2022 Through an Academic Nursing Project

1. Educate APHN members on the Million Hearts® Initiative and 2022 priorities.
2. Collaborate with other nursing organizations and partners on Million Hearts® goals.
3. Collect stories from community/public health nurses to show the impact of their work within the MH 2022 priority areas and disseminate them on APHNs Million Hearts® webpage.
4. Promote heart-healthy lifestyles among APHN members.



# APHN Member Survey Fall 2017

- Participants: **49**
- Average Score: **70%** (Lowest: 30% Highest: 100%)
- Areas that PHNs **scored the highest:**
  - ✓ Defining “population health strategy” (96%)
  - ✓ Triage/when to call 911 (94%)
  - ✓ Knowledge regarding the ABCS’s of Million Hearts (88%)
- Areas that PHNs **scored the lowest:**
  - ✓ Stages of HTN (31%)
  - ✓ Cardiovascular risk factors (51% correct)
  - ✓ Knowledge of the Perceived Stress Scale-4 (51% correct)
- **63%** of participants were correct on the percentage of heart attacks and strokes are preventable through healthy lifestyle behaviors. **What do you think?**



<b>Student Learning Outcomes</b>	<b>Measures</b>
State the aims, priorities, goals and strategies of the Million Hearts® Initiative.	Attendance and participation at Million Hearts® orientation.
Describe current trends in heart disease and stroke and hypertension risk at the population level.	<ul style="list-style-type: none"> <li>(1) Attendance and discussion at Million Hearts® orientation.</li> <li>(2) Scores on Million Hearts® pre- and post-test.</li> </ul>
<p>Demonstrate ability to:</p> <ul style="list-style-type: none"> <li>(1) Provide Million Hearts® screenings to participants from within an at-risk or hypertensive population.</li> <li>(2) Coach participants on heart healthy lifestyle changes.</li> </ul>	<ul style="list-style-type: none"> <li>(1) Completion OSUs Million Hearts Fellowship Modules.</li> <li>(2) Provide screenings and coaching to participants from Hood College community.</li> <li>(3) Collect pre- and post-data (blood pressure and lifestyle scores)</li> </ul>
Analyze the impact of a community nursing intervention of blood pressure screening and coaching on blood pressure and lifestyle focus areas in the at-risk and hypertensive population.	Participate in data collection and analysis of pre- and post-blood pressure and stress and lifestyle scores.
Relate the work of a local Million Hearts® project to the aims, priorities, goals national Million Hearts initiative.	(1) Present work at in-person Million Hearts® Collaboration meeting.
Contribute to an abstract for dissemination of the project	Written contribution submitted to professional organization.

# Hood Million Hearts® Program

## Design

- Began as Summer Research Institute with 2 students; 6 students involved to date
- 30 completers by end of 2018, 12 participating now

## Intervention

- Student: Complete OSU Million Hearts® Fellow Modules
- Participants: receive **Million Hearts® screening, free home monitor & coaching** from nursing student over 8-10 weeks

## Measures

- Pre- & post BP, lifestyle satisfaction & Perceived Stress Scale-4 (PSS-4) scores

## Intended outcomes

- Participants: greater knowledge of numbers & how to use of monitor, improved blood pressure and lifestyle focus areas.
- Students: increase knowledge of prevention and Million Hearts®, Million Hearts® Fellow, Research Assistant
- College: Joined NIEPCAMH, campus-wide wellness
- Community: Health Dept., YMCA, Hillcrest Pharmacy, Senior Center



# Blood Pressure Categories

<b>BLOOD PRESSURE CATEGORY</b>	<b>SYSTOLIC mm Hg (upper number)</b>		<b>DIASTOLIC mm Hg (lower number)</b>
<b>NORMAL</b>	<b>LESS THAN 120</b>	<b>and</b>	<b>LESS THAN 80</b>
<b>ELEVATED</b>	<b>120 – 129</b>	<b>and</b>	<b>LESS THAN 80</b>
<b>HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 1</b>	<b>130 – 139</b>	<b>or</b>	<b>80 – 89</b>
<b>HIGH BLOOD PRESSURE (HYPERTENSION) STAGE 2</b>	<b>140 OR HIGHER</b>	<b>or</b>	<b>90 OR HIGHER</b>
<b>HYPERTENSIVE CRISIS (consult your doctor immediately)</b>	<b>HIGHER THAN 180</b>	<b>and/or</b>	<b>HIGHER THAN 120</b>

# Sample Screening Triage Protocol

## Emergent

- BP  $\geq 180$  OR  $\geq 110$
- Clinical Presentation – e.g. chest pain, facial drooping, slurred speech, headache, visual disturbances, or other symptoms concerning for MI, or stroke.



CALL 911 - Refer to ED for **immediate** Care with clinical symptoms

Same day PCP/Urgent Care for asymptomatic presentation

Notify supervisor/faculty

## Urgent/Convenient

- BP  $\geq 160-179$  OR  $\geq 100-109$  without any current symptoms



**Urgent/Convenient** – referred to PCP

If PCP cannot see within 2-3 days, refer to local urgent care for evaluation and interim care for stabilization. Then refer on to PCP from urgent care setting.

Notify supervisor/faculty

## Non-Urgent

- BP 130-159 OR 80-89
- Reported elevated cholesterol in past or has never had a cholesterol screening
- Abnormal BMI ( $>30$ )
- Current smoker with readiness to quit
- Reports elevated stress



**Non-Urgent** – refer to PCP

Refer to PCP for follow-up within 1-2 months.

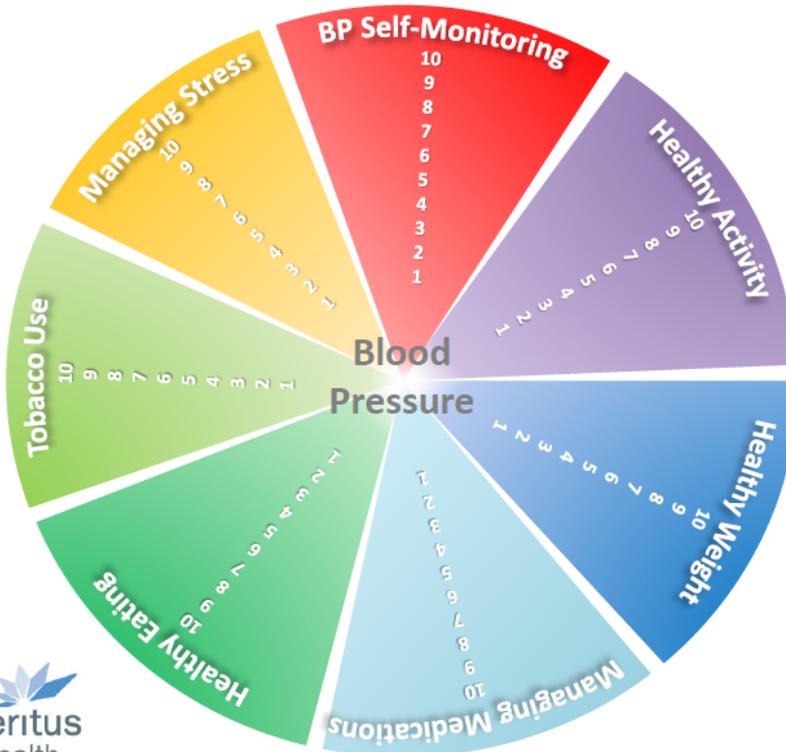
# Model for Healthy Blood Pressure

Circle the number on the wheel that best describes your satisfaction in each of these areas (1 – unsatisfied, 10 – completely satisfied).  
Connect the circles. What areas would you like to improve?

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Pre or Post (circle one)



## BP Self-Monitoring

Regularly taking your blood pressures at home or at your pharmacy.

1 2 3 4 5 6 7 8 9 10

## Healthy Activity

Finding ways to move around and meet activity guidelines.

1 2 3 4 5 6 7 8 9 10

## Healthy Weight

Maintaining a recommended weight.

1 2 3 4 5 6 7 8 9 10

## Managing Medications

Taking your medications as prescribed.

1 2 3 4 5 6 7 8 9 10

## Healthy Eating

Reducing salt intake and eating more fruits and vegetables.

1 2 3 4 5 6 7 8 9 10

## Tobacco Use

Staying away from cigarettes and tobacco products.

1 2 3 4 5 6 7 8 9 10

## Managing Stress

Reduce the amount of stress in your life and/or find ways to ensure it does not affect you as much.

1 2 3 4 5 6 7 8 9 10



Parish Nursing

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# Participant Results

Hood Million Hearts  
(N = 42  
as of 04/30/19)



Measure	Tool	Pre-mean	Post-mean	Sig
Systolic BP	Omron 5 Series Blood Pressure Monitor	126.05	122.12	<b>0.027</b>
Diastolic BP	Omron 5 Series Blood Pressure Monitor	81.14	80.76	0.732
Lifestyle focus area 1	Model for Healthy Blood Pressure (Cooper & Zimmerman, 2016)	3.71	6.52	<b>0.000</b>
Lifestyle focus area 2	Model for Healthy Blood Pressure (Cooper & Zimmerman, 2016)	4.45	5.79	<b>0.003</b>
PSS-4 scores	OSU Million Hearts® toolkit	6.07	5.55	0.317

# Student Results

Student Pre- & Post-test Scores  
N = 6 as of 04/30/19

Student	Class	Pre-score	Post-score
1	2020	60%	90%
2	2019	90%	100%
3	2019	90%	100%
4	2019	50%	100%
5	2020	100%	100%
6	2020	70%	70%



# Results

## Community Screenings

<b>Dates</b>	<b># of screening locations</b>	<b>#of community members screened</b>	<b># of free monitors given</b>
Dec 2018	4	15	3
Feb 2019	5	56	4
March 2019	3	62	6
<b>TOTALS</b>	<b>11</b>	<b>133</b>	<b>13</b>



# National Interprofessional Education and Practice Consortium to Advance Million Hearts®

The screenshot shows a web browser window with the URL <https://wellness.osu.edu/million-hearts/million-hearts-participating-organizations>. The page header includes the OSU.EDU logo and navigation links like Help, BuckeyeLink, Map, Find People, Webmail, and Search Ohio State. The main content area features the text "Health and Wellness" and "Million Hearts® Participating Organizations". A navigation menu below the header includes Home, Students, Faculty and Staff, Patients and Community, and Chief Wellness Officer. A search icon is also present.

[Home](#) > [Faculty and Staff](#) > [Million Hearts®](#) > [Million Hearts® Participating Institutions](#)

- |  |  |
|--|--|
| Georgetown University  | University of Akron                                |
| Georgia State University   | University of Alabama (Capstone)                   |
| Gonzaga University   | University of Alabama at Birmingham                |
| Graceland University   | UCLA   |
| Grand Valley State University  | University of Arizona                              |
| Harper College   | University at Buffalo                              |
| Hartwick College   | University of Holy Cross                           |
| Henderson State University   | University of Houston                              |
| Hesson College   | University of Houston- Victoria                    |
|  Hood College | University of Illinois Chicago                     |
| Hospital Sisters Health System   | University of Iowa                                 |
| Houston State University- Victoria   | University of Kentucky                             |
| Indiana State University   | University of Mary Hardin-Baylor                   |
| Indiana University   | University of Medicine and Dentistry of New Jersey |
| Indiana University at Purdue   | University of Michigan at Flint                    |
| Indiana University at South Bend   | University of Mississippi                          |
| Indiana Wesleyan University  | University of Missouri                             |
| John Wood Community College  | University of Missouri-St. Louis                   |
| Johns Hopkins Medicine   | University of New Hampshire                        |



# Dissemination

## Presentations

- ♥ **Million Hearts® Collaboration in-person meetings (Aug 2018 & Mar 2019)**
- ♥ Association of Public Health Nurses (Atlanta, GA)
- ♥ **OSU Building Healthy Academic Communities Conference (Columbus, OH)**
- ♥ Association of Community Health Nurse Educators (Phoenix, AZ)

## Publications

- ♥ Manuscript submitted to Journal of Professional Nursing:  
*An Academic-Practice Partnership to Advance Million Hearts®*



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