



# Improving Hypertension Control Call to Action

Don DiPette, MD August 10<sup>th</sup>, 2022



## \*Health Quality Innovation Network

















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All non-physicians will receive a certificate of participation.











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### **Invited Faculty:**

Donald DiPette, MD No financial relationships were declared



## Logistics – Zoom Webinar





To ask a question, click on the **Q&A** icon.

Raise your hand if you want to verbally ask a question.

Resources from today's session will be posted in **Chat**.

You may adjust your audio by clicking Audio Settings.

You have been automatically muted with video turned off.





### Quality Improvement Organizations Sharing Knowledge. Improving Health Care. CENTERS FOR MEDICARE & MEDICARD SERVICES

## Purpose & Learning Objectives

- 1. Increase awareness and opportunities for improvement of the current hypertension control rates globally and in the United States.
- 2. Provide an overview of the HEARTS model including the HEARTS Technical Package and its impact on hypertension control rates.
- 3. Review the current approach to hypertension treatment including development of a population-based approach.
- 4. Review the current barriers to hypertension control.







# Introduction to the HEARTS in the Americas and HEARTS Technical Package: Opportunities for Improving Hypertension Control and Developing a Population-Based Approach to the Treatment of Hypertension within Clinical Practices/Organizations

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Health Sciences Distinguished Professor

University of South Carolina and University of South Carolina School of Medicine

Columbia, South Carolina

HEARTS in America August 10, 2022



### Donald J. DiPette, MD, FACP, FAHA





Donald DiPette M.D., FACP, FAHA is currently the Health Sciences Distinguished Professor at the University of South Carolina and the University of South Carolina School of Medicine in Columbia, South Carolina. He has previously held the positions of Special Assistant to the Provost for Health Affairs, Vice President for Medical Affairs and Dean of the School of Medicine at the University of South Carolina. He was Interim Senior Executive Dean and Chairman of Medicine and Professor of Medicine at the Texas A&M Health Sciences Center College of Medicine.

Dr. DiPette has served as the Director of Hypertension Research Program at Allegheny General Hospital and at University of Texas, he was Director of the Division of General Internal Medicine, Director for the Hypertension Section, and Vice Chairman for Educational Affairs and In-patient Affairs.

Dr. DiPette earned his bachelor's degree from Seton Hall University in South Orange, N.J. and his M.D. degree from Pennsylvania State University in Hershey, P.A. He is board certified in internal medicine and clinical pharmacology and has a specialist certification in hypertension. His major areas of research, which have been funded by the American Heart Association and the National Institutes of Health, include the pharmacologic treatment of hypertension and the role of novel neuropeptides in the pathophysiology of hypertension.

Dr. DiPette is actively involved in the Global HEARTS Initiative of the Centers for Disease Control and the World Health Organization, as well as the HEARTS in the Americas Program of the Pan American Health Organization. He currently serves as the Envoy for Latin American and the Caribbean to the World Hypertension League and is a member of the Editorial Board of the Journal of Clinical Hypertension.

He was the awardee of the World Hypertension League 2022 Detlev Ganten Excellence in Hypertension Award and Global Health Implementation.

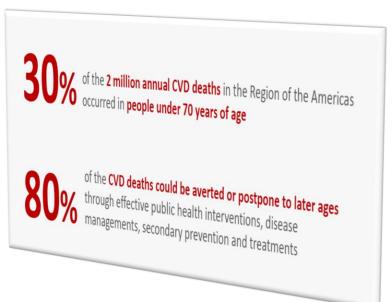






### **Cardiovascular Diseases in the Americas 2019**





Cardiovascular disease burden - PAHO/WHO | Pan American Health Organization

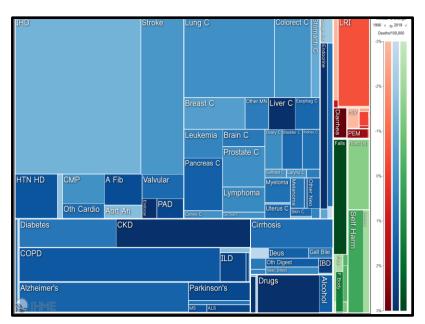
https://www.paho.org/en/hearts-americas



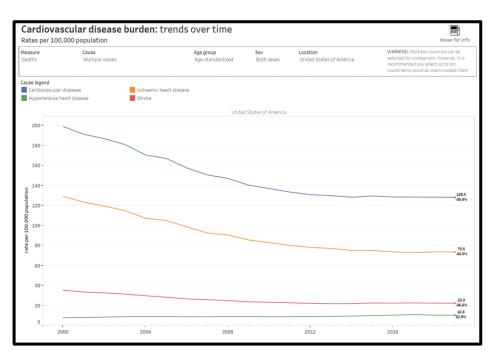


### **United States**

A. Both sexes. All ages, Deaths, 2019. and B. CVD Deaths Age-Standardized trend 2009-2019.



https://vizhub.healthdata.org/gbd-compare/



PAHO. The burden of cardiovascular diseases in the Region of the Americas, 2000-2019. Pan American Health Organization. 2021.





















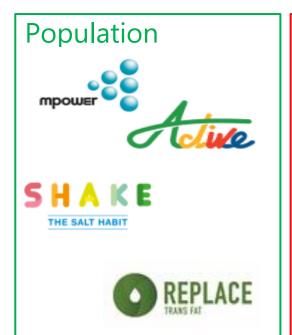


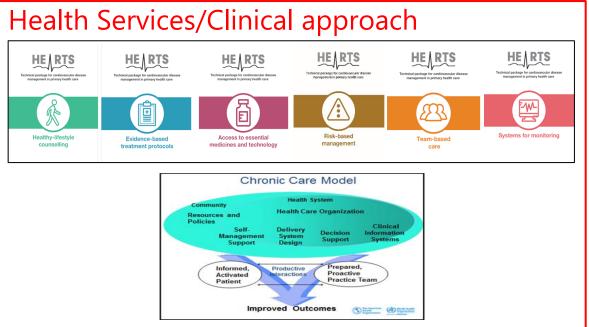












WHO. Global Hearts Initiative. https://www.who.int/cardiovascular\_diseases/global-hearts/en/https://www.paho.org/en/hearts-americas



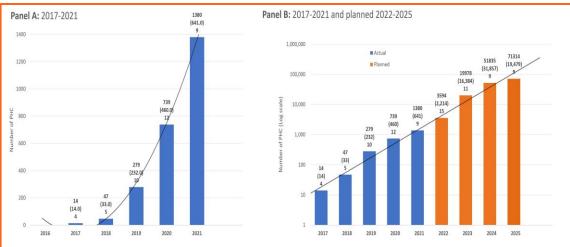


### **HEARTS** in the Americas





- 22 countries implementing HEARTS.
- More than 1300 PHC.
- More than 5 millon people covered.









### **HEARTS** in the Americas Technical Pillars

VISION: HEARTS will be the institutionalized model of care for cardiovascular risk management, with special emphasis on the control of hypertension and secondary prevention in primary health care in the Americas by 2025.



### **HEARTS** in the Americas

### **Guiding Principles**

Country ownership

HEARTS is led by the Ministries of Health, with the participation of other stakeholders and PAHO's technical cooperation.

The Initiative provides pragmatic, cost-effective, and feasible solutions to PHC.

HEARTS promotes the adoption of best practices in preventing and controlling CVD and improving health services organization.

HEARTS is a data-driven initiative.

Continuous learning cycles, peer-led teaching, dissemination of effective innovations, and lessons learned during implementation.

Integrating elements into the existing health care systems.

Recruiting more PHC facilities and increasing the speed of model institutionalization.

Simple and practical

Evidence-based

Accountability

Continuous learning

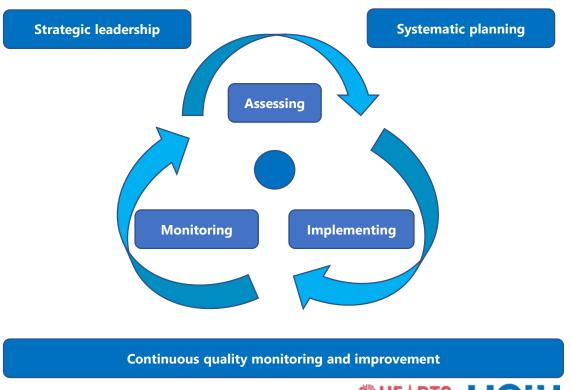
Long-term sustainability

Increasing the PHC capacity

# **HEARTS** in the Americas Implementation Strategy



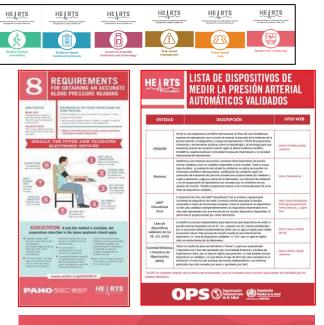




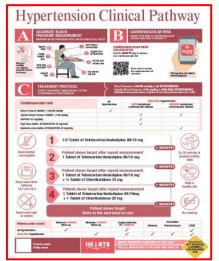
### **HEARTS Model vs. Traditional Model**

Characteristics	Traditional Model	HEARTS in the Americas		
Level of care	Specialty-based	Primary care-based		
Provider model	Physician-centered	Team-based care with task shifting		
Training and education	Not standardized and centered on specialist	Standardized and focused on the primary health care team		
Decision making	Individualized and based on complex clinical guidelines	Standardized clinical pathway with a specific treatment protocol		
BP measurement	Non-standardized technique. BPMDs may not be clinically validated and BP accuracy is not guaranteed	Adoption of standardized technique and regular training. Exclusive use of automated BPMDs clinically validated		
Thereapeutic approach	Physician preferences and complex medication- based pharmacologic formularies	Standardized, simple, directive treatment algorithm using FDC and specific, timely follow-up intervals.		
CVD risk evaluation	Discretionary	Integrated into the standardized clinical pathway and focus on CVD secondary prevention, including diabetes		
System for monitoring	Mainly for administrative purposes	Clinical monitoring performance evaluation, and systematic feedback		

### **HEARTS in the Americas Tools to Transform Practice**

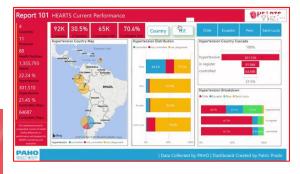














Brettler JW ate al. Lancet Reg Health Am 2022.https://www.thelancet.com/journals/lan am/article/PIIS2667-193X(22)00040-0/fulltext

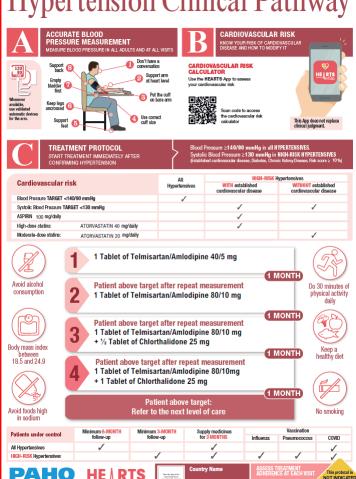
1. BP measurement accuracy

2. CVD risk assessment

3. Standardized Treatment Protocol

4. Treatment intensification

### Hypertension Clinical Pathway



5. Continuity of care and follow-up

6. Team-based care and task-shifting

7. Medication refill frequency

8. System for performance evaluation with feedback

CHILDBEARING

### Challenges

Break the political inertia and institutionalize HEARTS throughout the Americas.

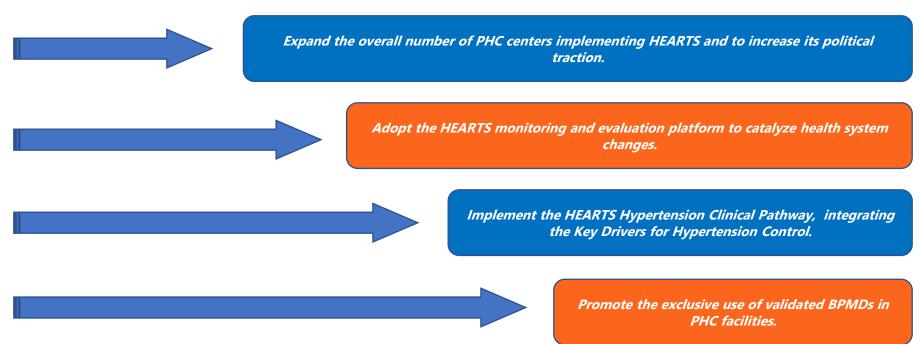
Improve access to high-quality health care, including medicines and devices

Strengthen Primary Health Care and its information systems.

Promote a culture based on continuous quality improvement.

### **The Way Forward**

HEARTS will be the institutionalized model of care for cardiovascular risk management, with special emphasis on the control of hypertension and secondary prevention in PHC in the Americas by 2025.



### **Process for Successful Change: Kotter**



### Establish a "sense of urgency/burning platform"

- Form a powerful coalition/allies
- Create a vision for change
- Communicate the vision
- Empower others to act on the vision/remove obstacles
- Build on the change/create short-term wins
- Consolidate improvements producing more change
- Anchor the change/institutionalize the new approaches





### Establish a "Sense of Urgency/Burning Platform"



- Noncommunicable diseases (NCDs) especially cardiovascular disease (CVD) is the leading cause of morbidity and mortality globally, in the nation. Hypertension is the leading risk factor for CVD.
- Hypertension control rates (>140/90 mmHg) globally are approximately 20% (Lancet 2021).
- Safe, effective, and affordable pharmacologic treatment for hypertension is available.
- Start honest discussions regarding how current practices have not been successful.
- Examine opportunities to increase the control rates of hypertension.
- The definition of insanity is doing the same thing over, and over again and expecting different results!





### **Recent NHANES Data:**

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### U.S. Population Results: A Call to Action! (JAMA 2020)

- Hypertension control rates (using <140/90 mmHg) continued to increase to 53.8% in the 2013-2014 survey
- However, hypertension control rates (using <140/90 mmHg) have significantly decreased to 43.7% in the last 2017-2018 survey</li>
- Using the ACC-AHA criteria of <130/80 mmHg, the hypertension control rate is 19% in the 2017-2018 survey
- This decrease in control rate parallels the recent increase in CVD-related morbidity and mortality!





# Declining HTN Control Rates: The Surgeon General's Call to Action to Control Hypertension-United States 2020



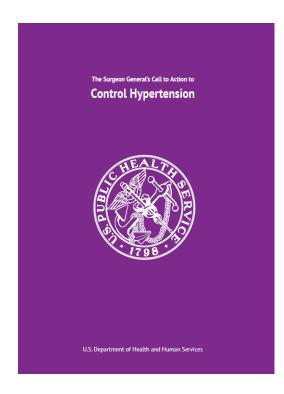
**Overall Goal:** "To avert the negative health effects of hypertension across the U.S. by identifying interventions that can be implemented, adapted, and expanded across diverse settings"

- **Goal 1.** Make hypertension control a national priority.
- **Goal 2.** Ensure that the places where people live, learn, work. and play support hypertension control.
- Goal 3. Optimize patient care for hypertension control.
   Strategy A

Advance the use of standardized treatment approaches and guideline recommended care including a hypertension formulary and treatment protocol

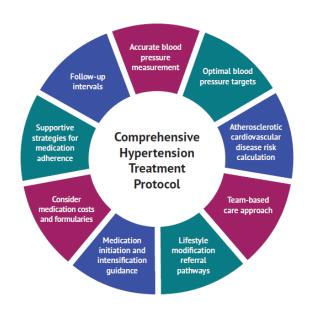






#### Goals and Strategies to Improve Hypertension Control





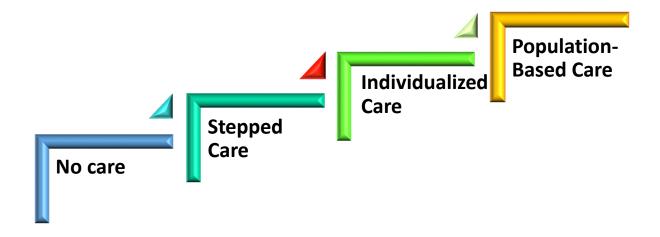
 $https://www.cdc.gov/bloodpressure/CTA.htm\#:\sim:text=The\%20Surgeon\%20General's\%20Call\%20to\%20Action\%20to%20Control\%20Hypertension\%20(Call,settings\%20across\%20the\%20United\%20States.$ 





# **Approaches to Care in the Pharmacologic Treatment of Hypertension**





DiPette, Ridley 2020 Skeete, Connell, Ordunez, DiPette. Integrated





#### **Barriers to Blood Pressure Control**



#### Patient

- Limited access to treatment
- Poor adherence to treatment

#### Health Care Provider

- Raised blood pressure attributed to "white coat hypertension"
- Reluctance to treat an asymptomatic condition
- Lack of adequate time with patient
- Therapeutic/Clinical inertia
- Lack of adherence to treatment guidelines

#### Health Systems

- Failure to delegate responsibility to non-physicians
- Inappropriate follow-up
- Absence of feedback to clinicians
- Issues related to supply, distribution, and cost of medications
- Complex medical regimens







### **HEARTS** in the Health System

Given the magnitude of CVD disease, it is necessary for systems to tackle the underlying common condition

One of the most cost effective to address this burden of disease is through the Primary Health Care approach/strategy

The HEARTS technical package is the primary care approach to reducing the burden of CVDs by strengthening components of health systems

The HEARTS package can be used in all contexts and countries







### **Consensus Among Main Global Organizations**

































MODULES OF THE HEARTS TECHNICAL PACKAGE							
		Who are the target users?					
Module	What does it include?	National	Subnational	Primary care			
ealthy-lifestyle counselling	Information on the four behavioural risk factors for CVD is provided. Brief interventions are described as an approach to providing counselling on risk factors and encouraging people to have healthy lifestyles.		1	<b>✓</b>			
vidence-based protocols	A collection of protocols to standardize a clinical approach to the management of hypertension and diabetes.	~	~	~			
ccess to essential medicines and technology	Information on CVD medicine and technology procurement, quantification, distribution, management and handling of supplies at facility level.	<b>√</b>	<b>✓</b>	✓			
isk-based CVD management	Information on a total risk approach to the assessment and management of CVD, including country-specific risk charts.		~	<b>√</b>			
Team-based care	Guidance and examples on team-based care and task shifting related to the care of CVD. Some training materials are also provided.		~	<b>√</b>			
Systems for monitoring	Information on how to monitor and report on the prevention and management of CVD. Contains standardized indicators and data- collection tools.	<b>√</b>	~	<b>√</b>			







### **HEARTS Technical Package**



#### **HEARTS TECHNICAL PILLARS**















#### Healthy lifestyle

Counselling on tobacco cessation, diet, physical activity, alcohol use and self-care



#### Evidence-based treatment protocols

Simple, standardized algorithms for clinical care



#### Access to essential medicines and technology

Access to core set of affordable medicines and basic technology



#### Risk-based management

Total cardiovascular risk assessment treatment and referral



#### Team care and task-sharing

Decentralized, community-based and patient-centred care



#### Systems for monitoring

Patient data collection and programme evaluation

Implementation manual for national and district programme managers

Toolkit for healthy lifestyle counselling and self-care

Simple algorithms for CVD risk, hypertension and diabetes management, secondary prevention, referral management

Toolkit to improve access to essential medicines and technology

CVD risk prediction charts

Toolkit for training health-care workers

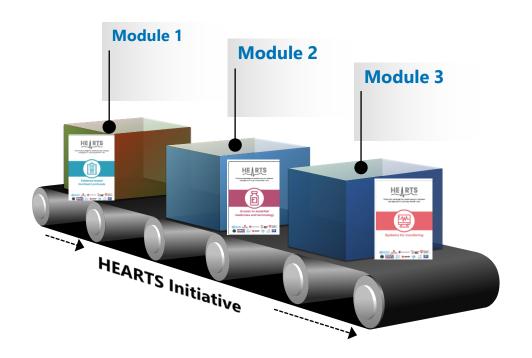
Toolkit for clinical monitoring and evaluation

Toolkit for quality improvement









### **Implementation Strategy**





# Barriers to Blood Pressure Control Addressed by a Standardized Formulary and Treatment Protocol: E-Module



#### Patient

- Limited access to treatment
- POOR ADHERENCE TO TREATMENT

#### Health Care Provider

- Raised blood pressure attributed to "white coat hypertension"
- Reluctance to treat an asymptomatic condition
- Lack of adequate time with patient
- THERAPEUTIC INERTIA
- LACK OF ADHERENCE TO TREATMENT GUIDELINES

#### Health Systems

- Failure to delegate responsibility to non-physicians
- Inappropriate follow-up
- Absence of feedback to clinicians
- ISSUES RELATED TO SUPPLY, DISTRIBUTION, AND COST OF MEDICATIONS
- COMPLEX MEDICATION REGIMENS





### Hypertension treatment algorithm: Key to a population-base, public health, primary care approach



- Critical strategy to increase hypertension control rates
- Addresses clinical/therapeutic inertia
- Simple, straightforward, and standardized
- Adopted: local/system, state, and/or country-wide

#### **GUIDING PRINCIPLES:**

- Primary care based
- Algorithm is for the "rule" NOT the "exception"
- Few medication titration steps: linear with no branch points
- Half-maximal effective dose of selected agent(s) for initial treatment
- Two medications (two pills or in FDC/SPC) for initial treatment





### Adult Hypertension

care management | institute

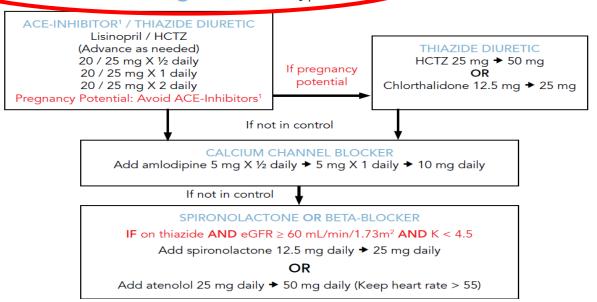
 $NNT CVA^2 = 63$  $NNT MI^2 = 86$ 

NNT CVA or  $MI^2 = 36$ 



BLOOD PRESSURE (BP) GOAL

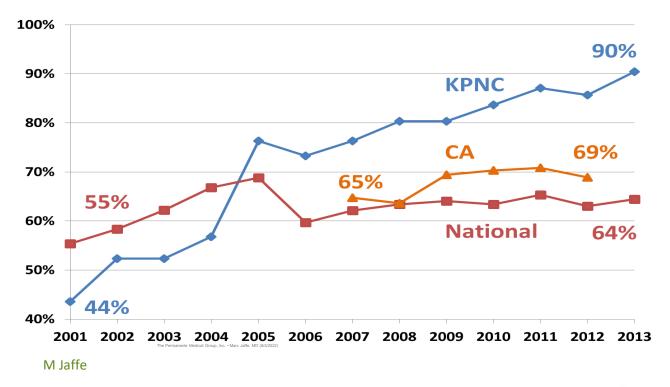
≤ 139 / 89 mm Hg – All Adult Hypertension





# Kaiser Permanente Northern California vs. Statewide and National HTN Control





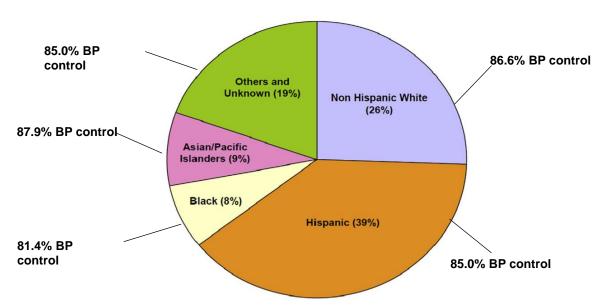




# Standardized Treatment Protocols Can Help Reduce Disparate Outcomes Kaiser Permanente Southern California



"Across all ages, races, and sexes, hypertension control exceeded 80%."



Shaw KM, Handler J, Wall HK, Kanter MH. Improving Blood Pressure Control in a Large Multiethnic California Population Through Changes in Health Care Delivery, 2004–2012. Prev Chronic Dis 2014;11:140173. DOI: http://dx.doi.org/10.5888/pcd11.140173





	BARBADOS	CHILE	COLOMBIA	CUBA
Secured political commitment	✓	✓	✓	✓
Demonstration site in place	<b>√</b> (2)	<b>√</b> (2)	<b>√</b> (2)	<b>√</b> (1)
Target (adult) population size	21,000	50,000	75,000	26,000
Staff, trained and certified in BP measuring & PAHO virtual course	✓	✓	✓	✓
Algorithm defined	✓	✓	✓	✓
Core set of medications	✓	✓	✓	✓
Fixed dose combination	(LIS + HTZ)	√ (VAL- AMP)	(LOS-HTZ)	0 <b>(ENA-</b> <b>HTZ)</b>
Registry	✓ (electronic)	✓ (electronic)	✓ (manual)	✓ (manual)
• Registry completeness (%)	45% & 49%	87%	73%	89%
Metrics M & E defined	✓	✓	✓	✓
Redistribution of Task well defined	✓	✓	✓	✓









# Quality Improvement Organizations Sharing Knowledge. Improving Health Care. CENTERS FOR MEDICARE & MEDICAID SERVICES

# Transitioning from Individualized to Population-Based Treatment for Hypertension

- Use a standardized, simplified approach to hypertension detection and treatment
- Develop a primary care-based approach for the patient "rule" not the "exception".
- HEARTS in the Americas including the HEARTS Technical Package is a comprehensive blueprint across a spectrum of populations: economic, geographic, racial, ethnic, and cultural.
- The launch of HEARTS in America can significantly improve the detection and treatment and importantly the control of hypertension in our state.
- HEARTS in America is in addition and complementary to programs already in place.









## **Questions?**

### Join us for the next HEARTS in America Lunch and Learn Session

Standardized, Simple Pharmacologic Treatment Protocols: A Critical Component of Effective Hypertension Control

August 24th, 2022







### **CME Credit and Certificates**

CME credit and certificate distribution are managed through SMA's **online process**. Within one week after the conclusion of the webinar, **please be on the lookout for an email from the Southern Medical Association (<u>customerservice@sma.org</u>) that will include your unique link to an online form to complete the evaluation, attendance attestation, and claim credit. Please review the following process to receive your certificate awarding credit (for physicians), or a certificate of participation (for non-physician attendees).** 

- Southern Medical Association (SMA) will create an online account for you including your unique login, using the email address you provided during registration (your username/ID is your email address).
- Upon receipt of your post-meeting email, click the link provided, and please make sure that
  your name and email address appear at the top of the form before completion.
- <u>After</u> you complete and submit your evaluation and attendance documentation, your certificate will be emailed to you as a .pdf attachment from <u>customerservice@sma.org</u> within 24 hours.







### **Contact Us**

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