

Improving Clinical Management and NCD Surveillance in the Context
of COVID-19 through HEARTS Implementation

Saint Lucia – 16-18 May, 2023

HEARTS in the Americas

Continuous Quality Improvement Methodology



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WHAT IS THE HEARTS QUALITY MODEL BASED ON?

DRIVERS FOR HYPERTENSION CONTROL

Drivers and scorecards to improve hypertension control in primary care practice: Recommendations from the HEARTS in the Americas Innovation Group

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- The HEARTS Innovation Group in the Americas defined 8 drivers for hypertension control (17 evidence-based and action-oriented interventions)
- These drivers, implemented together, increase the likelihood of better retention, coverage and control indicators.
- These drivers are aimed at improving processes to identify, measure, monitor and follow patients with hypertension with a more cost-effective model compared to the traditional model.

Continuous Quality Improvement Methodology

How is it implemented?

The clinical pathway: which establishes the step-by-step implementation of drivers at the health center level

The HEARTS Monitoring and Evaluation System: which offers the platform for timely measurement and space for the evaluation of results under a focus on efficiency, effectiveness and equity.

Hypertension Clinical Pathway

A ACCURATE BLOOD PRESSURE MEASUREMENT
MEASURE BLOOD PRESSURE IN ALL ADULTS AND AT ALL VISITS

- 1 Don't have a conversation
- 2 Support arm at heart level
- 3 Put the cuff on bare arm
- 4 Use correct cuff size
- 5 Support feet
- 6 Keep legs uncrossed
- 7 Empty bladder first
- 8 Support back

Whenever available, use validated automatic devices for the arm.

B CARDIOVASCULAR RISK
KNOW YOUR RISK OF CARDIOVASCULAR DISEASE AND HOW TO MODIFY IT

CARDIOVASCULAR RISK CALCULATOR
Use the HEARTS App to assess your cardiovascular risk.

Scan code to access the cardiovascular risk calculator.

This App does not replace clinical judgment.

C TREATMENT PROTOCOL
START TREATMENT IMMEDIATELY AFTER CONFIRMING HYPERTENSION

Blood Pressure $\geq 140/90$ mmHg in all HYPERTENSIVES
 Systolic Blood Pressure > 130 mmHg in HIGH-RISK HYPERTENSIVES
 (Established cardiovascular disease, Diabetes, Chronic Kidney Disease, Risk score $\geq 10\%$)

Cardiovascular risk	All Hypertensives	HIGH-RISK Hypertensives	
		WITH established cardiovascular disease	WITHOUT established cardiovascular disease
Blood Pressure TARGET $<140/90$ mmHg	✓		
Systolic Blood Pressure TARGET <130 mmHg		✓	✓
ASPIRIN 100 mg/daily		✓	
High-dose statins: ATORVASTATIN 40 mg/daily		✓	
Moderate-dose statins: ATORVASTATIN 20 mg/daily			✓

HEARTS

Monitoring and Evaluation System for the HEARTS initiative

INTRODUCING THE HEALTH CENTER-BASED MONITORING SYSTEM – DHIS 2

HEARTS M&E Team
PAHO/WHO

Continuous Quality Improvement Methodology

How is it implemented?

Implementation starts with

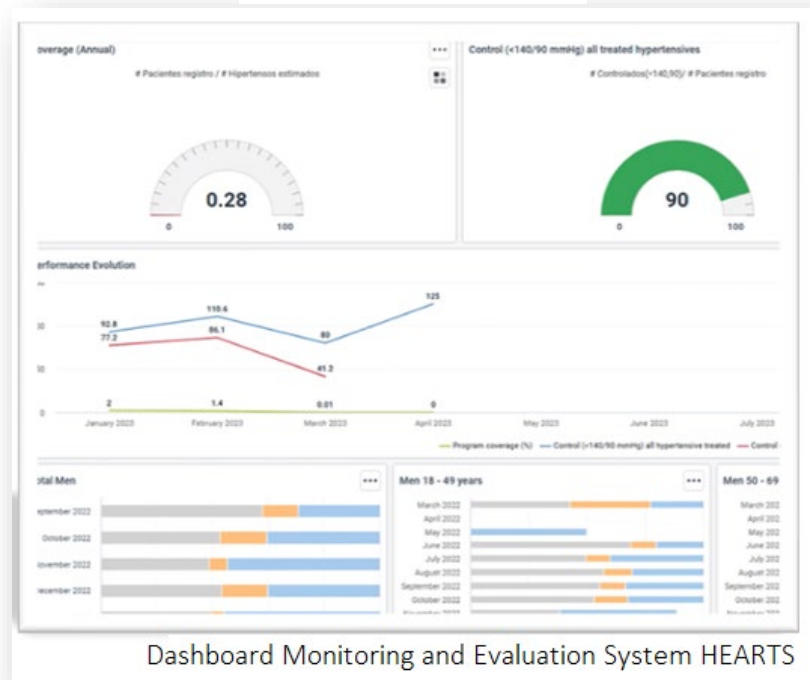
Advocacy in Ministry of Health and health centers for the construction of a culture based on a quality approach.

Training to health centers on quality approach and use of the M&E system.

Use of HEARTS BOOSTER as a methodology for implementation in health centers

Continuous Quality Improvement Methodology

How is it implemented?

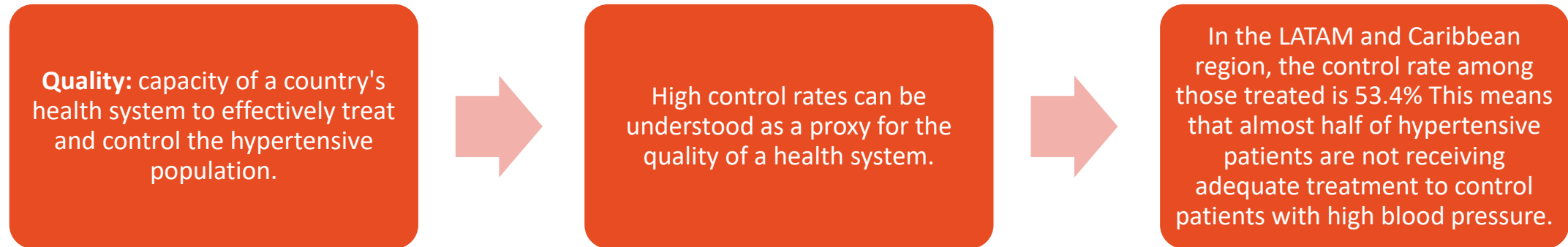


The implementation maturity index consolidates in one metric the progress of processes at the health center level, based on quality drivers.

The HEARTS M&E system provides a platform for critical analysis of each driver and connects with resources and socio-demographic factors.

Continuous Quality Improvement Methodology

Concept and Purpose



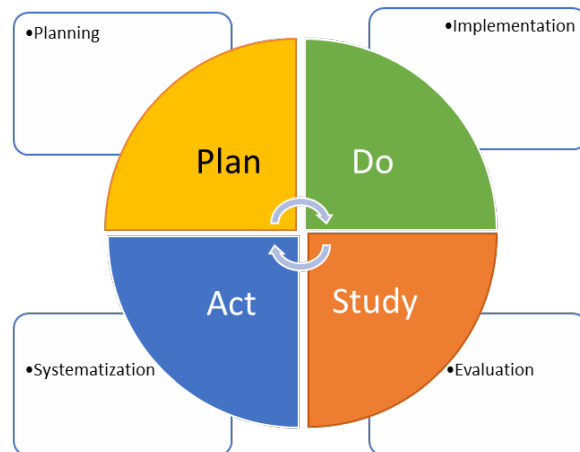
ADVANTAGES FOR HEALTH SYSTEM

- ✓ **HEARTS with a quality approach is more cost-effective than the traditional model**
- ✓ **Contributes to the improvement of coverage and control rates at the population level**
- ✓ **More effective follow-up of the population with hypertension**

HEARTS Accelerator in the Americas (Booster)

Purpose

Build a space to initiate and strengthen the first cycle of the quality improvement process for all centers by implementing HEARTS, guided by the drivers for the control of HTA and using the M&E system.



QUALITY IMPROVEMENT CYCLE

1. Initiate and strengthen the first cycle of the quality improvement process and energize all the HEARTS implementing centers to carry out this task.
2. Identify and implement clinical and management interventions to improve the management of hypertension in primary care, guided by the Key Drivers for Hypertension Control.
3. Carry out a standardized evaluation of the level of maturity and performance of health establishments that implement HEARTS by adopting the HEARTS Monitoring and Evaluation System.

HEARTS Accelerator in the Americas (Booster)



Plan	
❖	Plan to implement the key clinical and managerial interventions to improve the management of hypertension
●	6 month implementation plan including commitments, priorities, schedule, budget
●	Establish SME and allow all HEARTS Implementing Centers to report. Training
●	Identification and training of HEARTS leaders
●	Complete introductory training courses for implementation teams

Hypertension control drivers	Recommendations for implementation	Goals	Score (points) Total = 21
Diagnosis	1. BP measurement accuracy 1.a Establish BP measurement training every six months for all staff involved with BP measurement. 2.a Institute standardized BP measurement protocols, including patient preparation and repeated BP measurement if the first BP reading is elevated. 3.a Implement the exclusive use of validated automatic BPMD for clinical practice.	≥ 90%	3
		≥ 90%	1
		≥ 90%	1
2. CVD risk assessment	2.a Assess the CVD risk in all patients with hypertension to guide BP goal and frequency of follow-up: 2.b Use of combination BP medication, statin, aspirin (as needed) in high CVD risk patients, including those with diabetes and CKD.	≥ 80%	2
		≥ 80%	1
		≥ 80%	1
Treatment	3. Standardized Treatment Protocol 3.a Standardized treatment protocol with specific medications and doses 4. Treatment intensification 4.a Initiate pharmacological treatment immediately after the diagnosis of HTN is confirmed. 4.b Medication must be added or intensified as per standard protocol if BP ≥ 140/90 or SBP ≥ 130 mmHg for high-risk patients	Implemented	2
		Implemented	1
		≥ 70%	2
		≥ 70%	1
Continuity of care and follow-up	5. Continuity of care and follow-up 5.a Follow-up of elevated BP within 2-4 weeks if not controlled 5.b BP visit within six months for all patients with hypertension stable and well-controlled. 5.c BP visit within 3 months for all patients with hypertension and high CVD risk, including diabetes and CKD	≥ 80%	3
		≥ 80%	1
		≥ 80%	1
Delivery System	6. Team-based care and task-shifting 6.a BP measurement by NPHW appropriately trained and certified 6.b Follow-up BP visits with NPHW under supervision and guided by protocol 6.c Medication titration by a NPHW under supervision and guided by protocol.	≥ 90%	3
		≥ 70%	1
		≥ 70%	1
System for performance evaluation	7. Medication refill frequency 7.a Implement standard 3-month refill intervals for all BP medication prescriptions for patients stable and controlled 8. System for performance evaluation with feedback to facilitate tracking, prevent substantial deviations and promote timely program corrections. (Bi-monthly evaluation and feedback can be acceptable for small facilities, and evaluation every three months is the minimum acceptable).	Three months refill	3 (2 month refill = 2; monthly refill = 1)
		Monthly feedback	3 (Bi-monthly = 2; every three months = 1)

Table 2a: Hypertension control drivers, recommendations for implementation and scoring for Maturity index.

Level 1	Level 2	Level 3	Level 4	Level 5
<7	7-10	11-14	15-18	19-21

Table 2b: HEARTS maturity index*.
* The levels demonstrate implementation from lowest level (1), incipient to highest level (5) mature.

Indicators	Level of performance, goal, and scores				
	Poor (<50%)	Incipient (≥ 50%)	On Track (≥ 60%)	High (≥ 70%)	Excellent (≥ 80%)
Coverage†	0	1	2	3	4
Control (<140/90 mmHg) among all hypertensives treated	0	1	2	3	4
Control (<130 mmHg SBP) among all hypertensives-high CVD risk treated	0	1	2	3	4

Table 3: HEARTS performance index.
HEARTS Performance Index: Poor: Below <0.8, Incipient: 0.9 – 1.6; On Track 1.7 – 2.4; High 2.5 – 3.2; Excellent 3.3 – 4.0
* Coverage: Proportion of people in the catchment area (clinical facility) who have been registered as hypertensive out of the best estimate of expected prevalence in the catchment area or larger geographical unit in a specific period of time.

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Blood Pressure ≥140/90 mmHg in all HYPERTENSIVES.
Systolic Blood Pressure ≥130 mmHg in HIGH-RISK HYPERTENSIVES (Established cardiovascular disease, Diabetes, Chronic Kidney Disease, Risk score ≥ 10%)

Cardiovascular risk	HIGH-RISK Hypertensives	
	All Hypertensives	WITHOUT established cardiovascular disease
Blood Pressure TARGET <140/90 mmHg	✓	✓
Systolic Blood Pressure TARGET <130 mmHg	✓	✓
ASPIRIN 100 mg/daily	✓	✓
High-dose statins: ATORVASTATIN 40 mg/daily	✓	✓
Moderate-dose statins: ATORVASTATIN 20 mg/daily	✓	✓

Drivers and scorecards to improve hypertension control in primary care practice:
Recommendations from the HEARTS in the Americas Innovation Group - The Lancet Regional Health – Americas

HEARTS Accelerator in the Americas (Booster)



Implementation	
❖	Initiate implementation of the first key clinical and managerial interventions to improve the management of hypertension
•	Execute all the steps of the plan according to the established time frame
•	Primary health facilities use the platform to enter data and/or generate a synchronization process to collect data.
•	HEARTS Leaders
•	Training, communication, network, teamwork.

[The HEARTS app: a clinical tool for cardiovascular risk and hypertension management in primary health care - PubMed \(nih.gov\)](#)

Curso virtual sobre medición automática y precisa de la presión arterial. <https://www.campusvirtuales.org/en/course/virtual-course-accurate-automated-blood-pressure-measurement-2020>

Curso virtual sobre impulsores de Control de la Hipertensión Arterial en los Centros de Atención Primaria de Salud. <https://www.campusvirtuales.org/en/node/30810>

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Table 2b: HEARTS maturity index*

* The levels demonstrate implementation from lowest level (1), incipient to highest level (5) mature.



HEARTS Accelerator in the Americas (Booster)

Study (use evidence to assess results)
❖ Evaluation and socialization of results of the interventions to improve management of Hypertension
● Reporting and analysis of performance
● Identification of clinical opportunities and management for improvement
● HEARTS Leaders
● Recognition of the best centers HEARTS implementers

Hypertension control drivers	Recommendations for implementation	Goals	Score (points) Total = 21
Diagnosis	1. BP measurement accuracy	1.a Establish BP measurement training every six months for all staff involved with BP measurement.	≥ 90% 3 1
		2.a Institute standardized BP measurement protocols, including patient preparation and repeated BP measurement if the first BP reading is elevated.	≥ 90% 1
		3.a Implement the exclusive use of validated automatic BPMD for clinical practice.	≥ 90% 1
	2. CVD risk assessment	2.a Assess the CVD risk in all patients with hypertension to guide BP goal and frequency of follow-up.	≥ 80% 2 1
		2.b Use of combination BP medication, statin, aspirin (as needed) in high CVD risk patients, including those with diabetes and CKD.	≥ 80% 1
Treatment	3. Standardized Treatment Protocol	3.a Standardized treatment protocol with specific medications and doses	Implemented 2
		3.b Established protocol using FDC medication	Implemented 1
	4. Treatment intensification	4.a Initiate pharmacological treatment immediately after the diagnosis of HTN is confirmed.	≥ 70% 2 1
		4.b Medication must be added or intensified as per standard protocol if BP ≥ 140/90 or SBP ≥ 130 mmHg for high-risk patients	≥ 80% 1
Continuity of care and follow-up	5. Continuity of care and follow-up	5.a Follow-up of elevated BP within 2-4 weeks if not controlled	≥ 80% 3 1
		5.b BP visit within six months for all patients with hypertension stable and well-controlled.	≥ 80% 1
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Delivery System	6. Team-based care and task-shifting	6.a BP measurement by NPHW appropriately trained and certified	≥ 90% 3 1
		6.b Follow-up BP visits with NPHW under supervision and guided by protocol	≥ 70% 1
		6.c Medication titration by a NPHW under supervision and guided by protocol.	≥ 70% 1
	7. Medication refill frequency	7.a Implement standard 3-month refill intervals for all BP medication prescriptions for patients stable and controlled	Three months refill 3 3 (2 month refill = 2; monthly refill = 1)
	8. System for performance evaluation with feedback	8.a Implement monthly performance evaluation with feedback to facilitate tracking, prevent substantial deviations and promote timely program corrections. (Bi-monthly evaluation and feedback can be acceptable for small facilities, and evaluation every three months is the minimum acceptable).	Monthly feedback 3 3 (Bi-monthly = 2; every three months = 1)

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Systematization (Act and plan for next)

❖ Next phase of a continuous quality improvement cycle

- Definition of a work plan for the next 6 months
- Scaling up the implementation of the M&E system, using champions from countries as facilitators to create a learning community among countries
- HEARTS champions on the ground
- Coaching, communication, networking, teamwork.

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ASPIRIN 100 mg/daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
High-dose statins: ATORVASTATIN 40 mg/daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Moderate-dose statins: ATORVASTATIN 20 mg/daily	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

- 1** 1 Tablet of Telmisartan/Amlodipine 40/5 mg 1 MONTH
- 2** Patient above target after repeat measurement
1 Tablet of Telmisartan/Amlodipine 80/10 mg 1 MONTH
- 3** Patient above target after repeat measurement
1 Tablet of Telmisartan/Amlodipine 80/10 mg + ½ Tablet of Chlorthalidone 25 mg 1 MONTH
- 4** Patient above target after repeat measurement
1 Tablet of Telmisartan/Amlodipine 80/10mg + 1 Tablet of Chlorthalidone 25 mg 1 MONTH

1 MONTH Do 30 minutes of physical activity daily

1 MONTH Keep a healthy diet

1 MONTH No smoking

1 MONTH Avoid alcohol consumption

1 MONTH Body mass index between 18.5 and 24.9

1 MONTH Avoid foods high in sodium

1 MONTH Patients under control

	Minimum 6-MONTH follow-up	Minimum 3-MONTH follow-up	Supply medicines for 3 MONTHS	Influenza	Vaccination Pneumococcus	COVID
All Hypertensives	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HIGH-RISK Hypertensives	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

PAHO HEARTS

Country Name: _____
Entity name: _____

ASSESS TREATMENT ADHERENCE AT EACH VISIT

TAKE ALL MEDICATIONS AT THE SAME TIME EVERY DAY

THIS PROTOCOL IS NOT INDICATED IN WOMEN OF CHILDBEARING AGE

Monitoring and Evaluation System for the HEARTS initiative

INTRODUCING THE HEALTH CENTER-BASED MONITORING SYSTEM – DHS 2

HEARTS M&E Team
PAHO/WHO

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Hypertension Control Drivers at Primary Health Care Centers. Virtual Course.
<https://www.campusvirtualsp.org/en/node/30810>
Virtual Course on accurate automated blood pressure measurement.
<https://www.campusvirtualsp.org/en/course/virtual-course-accurate-automated-blood-pressure-measurement-2020>





The HEARTS Initiative
is the 2019 recipient of

Organizational Excellence
Award for Hypertension
Prevention and Control

World Hypertension League



The HEARTS Initiative
is the 2021 recipient of

WHF Advocacy Award in
Cardiovascular Health

World Heart Federation



HEARTS
IN THE AMERICAS