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



Angelo Gamarra, MSc

International Consultant PAHO-WHO

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

Jeffrey W. Brettler,^{4b} Gloria P Giraldo Arcila,⁶ Teresa Aumala,⁴ Allana Best,⁶ Norm RC Campbell,¹ Shana Cyr,⁹ Angelo Gamarra,⁶ Marc G. Jaffe,¹ Mirna Jimenez De la Rosa,¹ Javier Maldonado,¹ Carolina Neira Ojeda,¹ Modesta Haughton,¹¹ Taraleen Malcolm,¹ Vivian Perez,⁹ Gonzalo Rodriguez,⁹ Andres Rosende,⁶ Yamilé Valdés González,⁹ Peter W. Wood,⁷ Eric Zúñiga,⁴ and Pedro Ordunez^{c +}

^aSouthern California Permanente Medical Group, Los Angeles, CA, USA

^bDepartment of Health Systems Science, Kaiser Permanente Bernard J. Tyson School of Medicine, Pasadena, CA, USA ^cDepartment of Non-Communicable Diseases and Mental Health. Pan American Health Organization (PAHO), Washington, DC, USA

^dPrimary Health Care Center, Ministry of Health, Centro de Salud Conocoto, Quito, Ecuador ^eMinistry of Health, Park Street, Port of Spain, Trinidad and Tobago

¹Department of Medicine, Physiology and Pharmacology and Community Health Sciences, Libin Cardiovascular Institute of Alberta, Calqary, AB, Canada

⁹Ministry of Health, Wellness & Elderly Affairs, Sir Stanislaus James Building, Waterfront, Castries, Saint Lucia ^hDepartment of Endocrinology, The Permanente Medical Group, Kaiser San Francisco Medical Center, San Francisco, CA, USA ⁱSchool of Public Health, Faculty of Health Sciences, Universidad Autónoma de Santo Domingo, Dominican Republic ⁱOficina Escuela de Salud Pública, Ciudad Universitaria, Universidad Autónoma de Santo Domingo, Distrito Nacional, Dominican Republic

^kPan American Health Organization, (PAHO), Bogotá, Colombia ¹Department of Noncommunicable Diseases, Ministry of Health, Santiago de Chile, Chile

^mPan American Health Organization (PAHO), Ancon, Panamá

ⁿPan American Health Organization (PAHO), Port of Spain, Trinidad and Tobago

^oPan American Health Organization,(PAHO), Lima, Peru

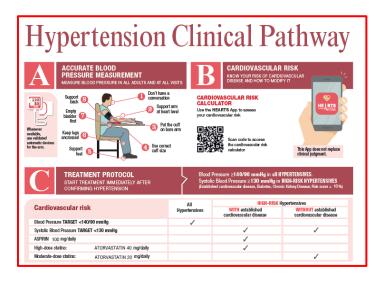
^PPan American Health Organization, (PAHO), Ciudad Autónoma de Buenos Aires, Buenos Aires, Argentina [®]National Technical Advisory Committee on Hypertension, University Hospital "General Calixto García", Havana, Cuba [†]Department of Medicine, Division of General Internal Medicine, University of Alberta, Edmonton, AB, Canada ^{\$}Health Services Antofaqasta, Servicio de Salud Antofaqasta, Universidad de Antofaqasta, Antofaqasta, Chile

- 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.



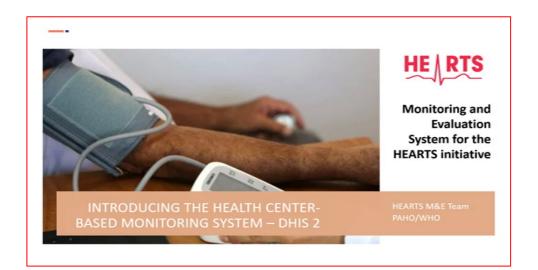
How is it implemented?

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.





How is it implemented?

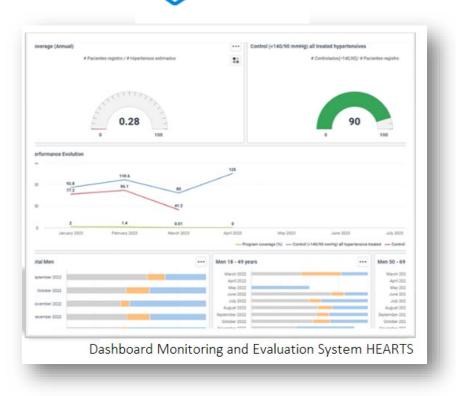
Implementation starts with

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



How is it implemented?



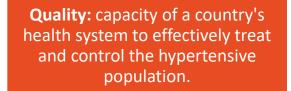
dhis2

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.



Concept and Purpose





In the LATAM and Caribbean region, the control rate among those treated is 53.4% This means that almost half of hypertensive patients are not receiving adequate treatment to control patients with high blood pressure.

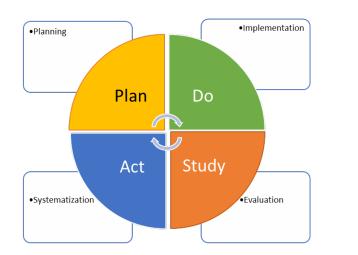
ADVANTAGES FOR HEALTH SYSTEM

- ✓ 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



Purpose

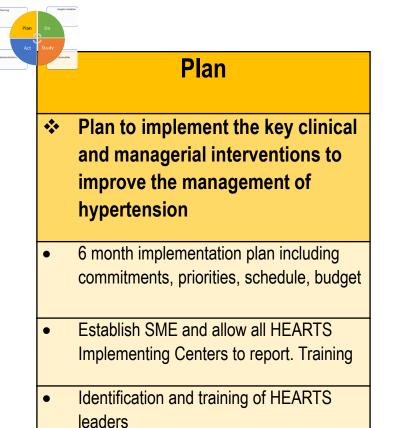
Build a space to initiate and strengthen the first cycle of the quality improvement process for all centers by implementing HEARTS, guided by the drivers for the control of HTA and using the M&E system.





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.



• Complete introductory training courses for implementation teams

System for perfor- mance 8. System for per- formance evalue. 8.a Implement monthly performance evaluation with feed Monthly ation 3 dismonthl back to feellate trucking, prevent subtantial deviations evaluation Monthly 3 dismonthl feedback evaluation match to feellate trucking, prevent subtantial deviations evaluation Feedback three mort trucking and promote timely program corrections. Gis-monthly facilities, and evaluation on the deviate can be acceptable for small facilities, and evaluation every three months is the mini- mum acceptable. Table 2a: Hypertension control drivers, recommendations for implementation and scoring for Maturity index.	Hypertension contro	ol drivers	Recommendations for implementation	Goals	Score (points) Total = 21
all staff involved with BP measurement. 2: 90% 1 bit introducing pattern proposition and repeated BP measurement protocols, including pattern proposition and repeated BP measurement protocols, including pattern proposition and repeated BP measurement protocols, including pattern protocols, including pattern, including pa	Diagnosis	1. BP measurement			3
2.a Institute standardized IP measurement protocols, as a Implement the exclusion and repeated IP measurement if the first IP reading is elevated. BPMD for clinical practice. 2.90% 1 2.CVD risk 2 2.0% 1 assessment 2.14 Assess the CD rule in all patients with hypertension to practed IP pad and frequency of follows, needed in high, CD rule is patients with hypertension to assessment 2.0% 1 7.exement 3.5 Standardized treatment protocol with specific medica- in receded in high, CD rule is patients with hypertension to assessment 2.0% 1 7.exement 3.5 Standardized treatment protocol with specific medica- in reserved in high, CD rule is confirmed. 1 1 7.exement 3.5 Standardized treatment protocol with specific medica- in reserved in high, CD rule is confirmed. 1 1 8.0 4.1 Instate pharmacological treatment immediately after intensification 2.0% 1 9.0 4.1 Instate pharmacological treatment immediately after intensification 2.80% 1 9.0 5.0 Continuity of care and follow-up of elevated IP within 2.4 weeks if not and takshffurg 2.80% 1 9.1 5.2 EP visit within 3 months for all patients with hyperten- so tabb and well-controlled. 2.80% 1 9.1 5.2 EP visit within 3 months for all patients with hyperten- so tabb and well-con		accuracy		≥ 90%	1
including patient preparation and reparted IP Press. Is a Implement the exclusive use of validated automatic by 20% 1 Is 20% 20% 1 Is assessment to fast patients with hypertension to guide IP goal and frequency of oldow up. Is do combination BM medication, statin, aspirin (as go 9% 1 Is do combination BM medication, statin, aspirin (as go 9% 1 Is do combination BM medication, statin, aspirin (as go 9% 1 Is do combination BM medication, statin, aspirin (as go 9% 1 Is do combination BM medication, statin, aspirin (as go 9% 1 Is do combination BM medication, statin, aspirin (as go 9% 1 Is do combination BM medication, statin, aspirin (as go 9% 1 Is do combination BM medication, statin, aspirin (as go 9% 1 Internation and doses Is do combination BM medication, statin, aspirin (as go 9% 1 Internation and doses Is do combination BM medication, statin, aspirin (as go 9% 1 Internation and doses Is do combination BM medication (asternation medicately after Internation and doses Internation and doses Internation and doses Internation and doses Is do failed or internatificat a per train- dard potocol (IF 8P ≥ 14090 or SBP ≥ 130 mmMg for Internation and doses Is do failed or internatificat a per train- go controlled Is do failed or internatificat a per train- go controlled Is do failed or internatificat aper train- go controlled Is do failed or internatification and based and the statin 3-2 mm das do and Is do failed or internatification and add or internatification and Is do failed or internatification and add or internatification and Is do failed or internatification and add or internatification and Is do failed or internatification and add well- controlled Is do failed or internatification and add well- controlled Is do failed or internatification and Is do failed or internatification and add well- controlled Is do failed or internatification and add well- controlled Is do failed or internatification and Is do failed or porticor Is do failed or internatification and add well- co				> 90%	1
3.1 implement the exclusive us of validated automatic: 2: 90% 1 2.VD risk 2 2.4 Assess the CVD risk nall patients with hyperension to guide life guidand frequency of rollow up. 2: 80% 1 2. bU to rollow up. 2: 80% 2: 80% 1 2. bU to combination BP medication, statin, saprin (as needed) in high CVD risk patients, including those with roll between and CRO. 2 2 Treatment 3: Standardized 2 2 2 2 1 4. Treatment 3: Standardized treatment protocol with specific medication inclusion and doals 2 20% 1 4. Treatment 2 20% 1 1 2 1 and follow up 2: 80% 1 1 1 1 1 and follow up 2: 80% 1					
2. VU risk 2 2. VU risk 2. A Assess the CV risk nall patients with hypertension to 2. B0% 1 2. bl Use of combination BP medication, statin, spatin (as 2. B0%) 1 2. bl Use of combination BP medication, statin, spatin (as 2. B0%) 1 Treatment 3. Standardized treatment protocol with specific medication (mplemented) 2 Treatment 3. Standardized treatment protocol with specific medication (mplemented) 1 1. Treatment 3. Standardized treatment protocol with specific medication (mplemented) 1 1. Treatment 3. Standardized treatment protocol with specific medication (mplemented) 1 1. Treatment 3. Standardized treatment protocol with specific medication (mplemented) 1 1. Treatment 3. Standardized treatment protocol with specific medication (mplemented) 1 1. Treatment 3. Standardized treatment protocol with specific medication (mplemented) 1 1. Treatment 3. Standardized treatment protocol with specific medication (mplemented) 1 1. Treatment 3. Standardized treatment protocol with specific medication (mplemented) 2. B0% 1 1. Treatment 3. Standardized treatment (modelse) specific medication (mplemented) 3 1 1. Treatment 3. Standardized treatment (modelse) specific medication (mplemented) 3 1 1. Treatment based dop m			surement if the first BP reading is elevated.		
2. COD risk 2. A Assess the CVD risk in all patients with hypertension to guide till guid guide till guide till guide till guid guide till gu				≥ 90%	1
assessment 2.a Asses the CVD rik in all patients with hypertension b 2.0% 1 2.b Use of combination BP medication, statin, sprinf (as 2.0% 1 assessment 3.5 transfardized 2 Treatment 3.5 transfardized treatment protocol with specific medication 1 Treatment 3.5 transfardized treatment protocol with specific medication 1 Treatment 3.5 transfardized treatment protocol with specific medication 1 Treatment 1 2 1 Treatment 1.5 transfardized treatment protocol with specific medication 2.0% 1 Treatment 5.0 continuity of care 3.6 continuity of care 2.0% 1 So a follow-up 5.0 continuity of care and follow-up 5.0 continuity of care and follow-up 2.0% 1 So a follow-up 5.0 continuity of care and follow-up 5.0 continuity of care and follow-up 2.0% 1 Delivery System 6. Team based care 2.0%			BPMD for clinical practice.		
statistical and frequency of follow up. 2-b Use of combination BP medication, taskin, asprin (as 2, 80%). 7-reatment 7-reat					
2.b Use of combination BP medication, stain, sprint say prime is a 20% 1 Treatment 1. Standardized in high COV first kations, including those with diabetes and COX. 2 Treatment 3.a Standardized treatment protocol with specific medication in plenemented in the cover stand does and doe does and does an		assessment		≥ 80%	1
Treatment 3. Standardized Technic Model (MD) (MD) risk patients, including those with guescific medical inclusion of the standardized treatment protocol with specific medical inclusion of the standardized treatment protocol with specific medical inclusion of the standardized treatment protocol with specific medical inclusion of the standardized treatment protocol with specific medical inclusion of the standardized treatment protocol with specific medical inclusion of the standardized treatment inmediately after to 2.70% 1 4. Treatment 2 2.0% 1 4. Treatment 2 2.0% 1 5. Continuity of car 3. Eolfox up of elevated BP within 2.4 weeks if not 2.80% 2.80% 1 6. Treatm based care 3. Eolfox up of elevated BP within 2.4 weeks if not 2.80% 2.80% 1 6. Treatment (Still within 3 menths for all patients with hyperten 2.80% 2.80% 1 1 9. Controlled 5.80 Presumment by NHW appropriately trained and 2.80% 1 1 1 9. Delivery System 6. Team based care 3 <				> 80%	
Continuity of care and follow-up 3. Standardized treatment protocol with specific madia- treatment intensitication is a standardized treatment protocol with specific madia- treatment intensitication is a stabilitied protocol using FDC medication Implemented intensitication 1 Continuity of care and follow-up 3. Standardized treatment protocol with specific madia- intensitication 2.0% 1 Continuity of care and follow-up 5. Continuity of care and follow- up 3. Continuity of high-risk patients 3. 3. Continuity of care and follow-up 5. Continuity of care and follow- up 5. Continuity of care and follow- up 3. 2.0% 1. Delivery System 6. Team based care and tashefting 6. BP measurement by NPHW appropriately trained and certified 2.0% 1. Delivery System 6. Team based care and tashefting 6.3 BP measurement by NPHW under supervision and certified 2.0% 1. System for prefore evaluation 7. Amelication refill requery with feedback. 7.1 3. 3. 3. System for prefore evaluation 8. Stale model model care compares reparations for all patients with hyperter- ation with feedback. 3. 3. 3. System for prefore evaluation 7. A. Implement standard 3-month refil intervisity for all BP medication prefore pr				2 00 %	
Treatment 1.5 Standardized retainent protocol with specific medical inglemented structures and does 1 Treatment 3.5 Standardized retainent protocol with specific medical inglemented structures and does 1 4. Treatment 2 5. Continuity of car 5. Continuity of car and follow up 2 car and follow up 5. Follow up of elevated BP within 2.4 weeks if not 2 controlled 5. Follow up of elevated BP within 2.4 weeks if not 2 optime car and follow 5. BP follow up BP with within 3 months for all patients with hyperten- sion and high CVD risk, including diabetes and CND 2 Delivery System 6. Team-based care 3 and task-shifting cat field by protocol. 2 vite field by protocol. 3 3 system for perfor 6. Stem for perform standard 3-month refil intervals for all BP Three month standard 3-month refil intervals for all BP realization preacriptions for pat					
Protocol sub Exhibited protocol using PCC medication Implemented 1 4. Treatment 2 20% 1 intensification 4.a Initiate pharmacological treatment immediately after 2.0% 1 continuity of care 5. Continuity of 3.b Exhibition motion added or intensified as per stam- dard protocol if BP 2: 14000 or SBP 2:150 mmHg for 3 continuity of care 5. Continuity of care and follow 5.a Follow up of elevated BP within 2:4 weeks if not 2.80% 1 continuity of care 5. Continuity of care and follow 5.a Follow up of elevated BP within 2:4 weeks if not 2.80% 1 Delivery System 6. Team-based care and tak-shifting 6.a BP measurement by NPHW appropriately trained and guided by protocol. 2.90% 1 Delivery System 6. Team-based care and tak-shifting 6.a BP measurement by NPHW under supervision and guided by protocol. 2.90% 1 7. Medication refili frequency 7.a Implement standard 3-month refil intervals for all BP medication previous for patients stable and controlled 3 30 month 1 monthy in controlled 3 System for perform 8. System for per- formance arealue 8.a Implement monthy performance evaluation with feed- ation more compatible. 3 36 month in monthy in controlled 3 System for perform 8. System for per- ting 8.a Implement monthy performance evaluation with	Treatment	3. Standardized			2
But Stabilished portocol using PCC medication Implemented 1 A. Treatment Intensfication A. Treatment Intensfication A. Treatment Intensfication A. Initiate pharmacological treatment General confirmed. A. Medication must be added or internsfied as per stam deal protocol Ab Medication must be added or intensified as per stam deal protocol Ab Medication must be added or intensified as per stam deal protocol Ab Medication and follow-up A. Continuity of are and follow-up Continuity of care and follow-up S. Continuity of are and follow-up bab Protocol Bo Ab Medication Controlled So a Follow-up of elevated BP within 2-4 weeks if not So So So Controlled So So So Controlled So Controlled So So Controlled So So Controlled So Controlled So Controlled So Controlled		Treatment	3.a Standardized treatment protocol with specific medica-	Implemented	1
4. Treatment 2 intensification 4.3 Initiate pharmscological treatment immediately after 2:076 1 continuity of care 3. 0.0 initiation 4.3 Initiate pharmscological treatment immediately after 2:076 1 continuity of care 3. 0.0 initiation 5.8 of Particle as per stam- dard protocol IB P2: 14000 or SBP ≥ 130 mmHg for 3 3 and follow-up 5. Continuity of care and follow- up 5.8 of Particle as per stam- sion stable and well- controlled 2:076 1 Delivery System 6. Team-based care and tak-shifting 6.8 BP measurement by NHW appropriately trained and guided by protocol. 2:076 1 2. 0.0 Follow-up BP visits with NPHW under supervision and guided by protocol. 2:076 1 2. 0.0 Follow-up BP visits with NPHW under supervision and guided by protocol. 2:076 1 3. 6. Medication refill frequency 7.2 Implement standard 3-month refil intervals for all BP medication precipitions for patients stable and controlled 3 Borther monthy a monthy n metication precipitions for patients stable and controlled 3 Borther monthy performance evaluation with feed- back to focilitate tracking, preven stubstantial deviations with feedback. Sa Implement monthy performance evaluation and scoring for Maturity index.		Protocol			
intensification 4.2 Initiate pharmacological treatment immediately after 2.70% 1 delargenesis of HVI adoptions in HVI adopting HVI adoptions in			3.b Established protocol using FDC medication	Implemented	
Continuity of care and follow-up 3. Continuity of care and follow- up 3. Continuity of care and follow- sion stable and well-controlled. 3. B0% 1. Continuity of controlled Delivery System 6. Team-based care and tak-shifting 6. BP measurement by NHW apportanty controlled 2. 80% 1. Controlled Delivery System 6. Team-based care and tak-shifting 6. BP measurement by NHW apportants trained and controlled 2. 90% 1. Controlled 2. Medication refill frequency 7. Medication refill frequency 7. Indeptication prevents than data 3-month refill intervals for all BP medication preventions for patients stable and controlled 3. Controlled 3. Controlled 3. Controlled 3. Controlled System for perform evaluation 8. System for per- formance available. 8. System for per- metication preventions for patients stable and controlled 3. Controlled 3. Controlled 3. Controlled 3. Controlled System for perform evaluation 8. System for per- formance available. 8. System for per- tor stable and controlled 3. Controlled 3. Controlled 3. Controlled 3. Controled 3. Controlled					
Continuity of care and follow-up 3. Continuity of high-risk patients 2. 80% 1 Continuity of care and follow-up 3. Continuity of care and follow-up 2. 80% 1 So continuity of and follow-up 5. Continuity of care and follow-up 2. 80% 1 So B Pollow-up of elevated BP within 2.4 weeks if not care and follow-up 2. 80% 1 So B Pollow-up of elevated BP within 2.4 weeks if not care and follow-up 2. 80% 1 So B Pollow-up of elevated BP within 2.4 weeks if not care and follow-up 2. 80% 1 So B Pollow-up of elevated BP within 3.1 months for all patients with hyperten- sion and high CO risk, including diabetes and COD 3 Delivery System 6. Team based care auto-cartified 3 3 6. Real base diabeta diabeta diabeta diabeta diabeta diabeta diabeta guided by protocol actified 2. 90% 1 7. Medication refill frequency 7. Medication refill frequency 3 3 8. System for perfor 8. System for per- formance walks. Bal Implement standard 3-month refill intervals for all BP medication prescriptions for patients stable and ation 3 3 8. System for perfor 8. System for per- formance walks. Bal Implement month performance evaluation with feed- ation 3 3 8. System for perfor 8. System for per- formance walks. Bal Implement month performance evaluation with feed- ation 1 3		intensification		≥ 70%	1
continuity of care and follow-up 3. Continuity of care and follow-up 3. Continuity of controlled 3. EV Provide State St				> 80%	
Societization in the problem in themolem in the problem in the problem in the pr				2 00%	
Continuity of care and follow: 3 3 and follow:up S. Follow: up of elevated BP within 24 weeks if not 280% 1 up S. BP (vii within 3 is months for all patients with hyperten- sion atable and well- controlled. 280% 1 Delivery System 6. Team-based care and task-shifting 6. BP measurement by NHW appropriately trained and guided by protocol. 2.90% 1 Delivery System 6. Team-based care and task-shifting 6. BP measurement by NHW appropriately trained and guided by protocol. 2.70% 1 2. Welckation refill 6. Medication trains by a NPHW under supervision and guided by protocol. 2.70% 1 3. System for perfor 8. System for per- formance evaluation ation 2.80% to focilitate tracking, prevent substantial deviations controlled 3 month free medication prevision for patients stable and controlled 3 System for perfor 8. System for per- formance evaluation ation Bandperiment monthy performance evaluation with feed- back to focilitate tracking, prevent substantial deviations for three evaluation and feedback can be acceptable for small facilities, and evaluation every three months is the mini- mum acceptable. 36 month i three months is the mini- mum acceptable. able 2.02: Hypertension control drivers, recommendations for Implementation and scoring for Maturity index. 3					
up controlled 20% 20% 1 35.8 B* voit within as months for all patients with hyperton sion and high CVD risk, including diabetes and CDD 20% 1 Delivery System 6. Team-based Controlled. 20% 1 0.6 B* Prinesurement by NHW appropriately trained and outlide by protocol. 20% 1 0.6 D* Follow up B* visits with NPHW under supervision and outlide by protocol. 270% 1 7. Medication refill frequency 7. Amelication patients tandad 3-month refil intervals for all B* medication prescriptions for patients table and controlled 3 6. month monthly ne medication prescriptions for patients table and solution in the feedback con be acceptable for small feedback. 36 in month freedback System for perfore stable and ation back to focilitate tracking, prevent substantial deviation with feed- back. Monthly feedback. 36 is month freedback. ation back to focilitate tracking, prevent substantial deviation with feed- back. Monthly feedback. 36 is month freedback. ation back to focilitate tracking, prevent substantial deviation stable for small for substantion and feedback. Monthly feedback. 36 is month freedback.	Continuity of care	5. Continuity of			3
Sb. BP (visit within six months for all patients with hyperterm) ≥ 80% 1 Sc. BP visit within 3 months for all patients with hyperterm) ≥ 80% 1 Delivery System 6. Team-based care and task-shifting 6. BP Pressurement by NPHW appropriately trained and certified ≥ 50% 1 6. Following SP visit within NPHW under supervision and guided by protocol ≥ 70% 1 7. Medication refill frequency 7. Medication refill frequency 3 2 7. Medication refill frequency 7. Implement standard 3-month refill intervals for all BP medication prescriptions for patients stable and controlled 3 2 System for perfor- evaluation 8. System for per- diant 8. System for perfor- ation 8. System for	and follow-up	care and follow-	5.a Follow-up of elevated BP within 2-4 weeks if not	≥ 80%	1
sion stable and well-controlled. 5. CB P Visit within 3 months for all patients with hyperton- sion and high CVD risk, including diabetes and CDD Delivery System and task-shifting c.ettrifed 0. B P mesurement by NHW appropriately trained and oguided by protocol. 7. Medication refill frequency 7. Medication refill frequency 8. System for perfor 8. System for perfor 8. System for perfor 8. System for perfor 8. System for perfor south freedback ation with freedback ation ation back to focilitate tracking, prevent substantial deviations frequency by the freedback ation south freedback ation ation ation ation back to focilitate tracking, prevent substantial deviations frequency is a system for per- formance expression and freedback can be acceptable for small frequency is a system for performance evaluation with freed- south freedback ation ation ation ation ation back to for implementation and scoring for Maturity index. The frequency is a system for performance is a system for performance evaluation and scoring for Maturity index. The frequency is a system for performance evaluation and scoring for Maturity index.		up			
System for performance evaluation 8.3 system for performance evaluation 8.3 system for performance evaluation 3 System for performance 8.5 system for performance evaluation 8.3 system for performance evaluation static transition generation static transition static and static transition performance evaluation with feed at the evaluation and feedback can be acceptable for small static transition static devaluation and transition static transition static devaluation and transition static devaluation and transition static devaluation static devaluation and transition statis the minimum acceptable. 1				≥ 80%	1
System for perfor 8. System for perfor 8. System for perfor 3.8 Implement monthly performance evaluation with feedback 3.8 monthly monthly monthly feedback System for perfor 8. System for perfor 1.8 monthly monthly monthly feedback 3.8 monthly monthly monthly feedback seveluation 1.8 monthly monthl					
Delivery System 0. Tam based care 3 and task shifting 6.8 P messurement by NPHW appropriately trained and ≥ 90% 2 90% 1 6.0 F offlow up BP visits with NPHW under supervision and guided by protocol. 2 70% 1 7. Medication effiling 6.6 F offlow up BP visits with NPHW under supervision and guided by protocol. 2 70% 1 7. Medication effiling 7. A Implement standard 3-month refilintervals for all BP Three months 3 (2 month) medication prescriptions for patients stable and monthly neffiling 3 System for performance evaluation 8. System for performance evaluation and the eduback can be acceptable for small feedback 3 8 (B month) feedback 3 evaluation ation back to facilitate tracking, prevent substantial devalations for evaluation and feedback can be acceptable. 3 8 (B month) feedback 3 rable 2a: Hypertension control drivers, recommendations for implementation and scoring for Maturity index. The second stable and scoring for Maturity index. 1				≥ 80%	1
and task-shifting 0.a BP mesurement by NHW appropriately trained and 2.2 90% 1 oc. BPT mesurement by NHW appropriately trained and 2.2 90% 1 0.6 Pollow-up BP viats with NHW under supervision and 2.2 70% 1 oc. Medication trained by protocol. 2.70% 3 7. Medication refill frequency 7, amplement standard 3-month refil intervals for all BP medication graded by protocol. 3 7. Medication refill frequency 7. Implement standard 3-month refil intervals for all BP medication grade by protocol. 3 System for perfor 8. System for per- formance evaluation and normal frequency for all BP medication grade by protocol. 3 sale and the system for performance evaluation with feed ation back to focilitate tracking, prevent substantial deviations for all deviations and scoring for Maturity index. atable 2a: Hypertension control drivers, recommendations for implementation and scoring for Maturity index.	Delivery System	6 Team-based care	sion and high CVD risk, including diabetes and CKD		
certified 6.0 Follow yp BY visits with NPHW under supervision and 270% 270% 1 6.0 Follow yp BY visits with NPHW under supervision and 270% 270% 1 7. Medication transition by a NPHW under supervision and 270% 3 3 7. Medication transition prescriptions for patients stable and refile 3 3 System for performance evaluation 8. System for performance evaluation prescriptions for patients stable and the education prescriptions for patients stable and the education performance evaluation with feed. Monthly 3 evaluation 8. System for performance evaluation for proteints stable and the evaluation at a scriptible for small feedback and feedback can be acceptable for small feedback. 3 (Birmonth) evaluation ation back to facilitate tracking, prevent substantial devaluation feedback and headback can be acceptable for small facilitate. 3 (Birmonth) Table 2a: Hypertension control drivers, recommendations for implementation and scoring for Maturity index. Table 2a: Hypertension control drivers, recommendations for implementation and scoring for Maturity index. Second Stable 2a: Hypertension control drivers, recommendations for implementation and scoring for Maturity index.	benvery system		6.a BP measurement by NPHW appropriately trained and	> 90%	-
guided by protocol 2 70% 1 6.6 Medication thration by a NPHW under supervision and guided by protocol. 2 70% 1 7. Medication terration by a NPHW under supervision and guided by protocol. 2 70% 1 7. Medication terration frequency 7.a Implement standard 3-month refill intervals for all BP controlled Three months refill System for perfor- mance 8. System for per- formance evaluation 8. System for performance evaluation with feed ation with feedback 8. Implement monthly performance evaluation with feed add momente imaly program corrections, Biomothly revaluation and feedback can be acceptable for small fieldites, and evaluation every three months is the mini- mum acceptable. 3		-		_	
Ac Medication triation by a MPHW under supervision and participation of the second secon			6.b Follow-up BP visits with NPHW under supervision and	≥ 70%	1
guided by protocol. 3 7. Medication relit 7.a Implement standard 3-month relit intervals for all BP Three month 7. Medication perform 7.a Implement standard 3-month relit intervals for all BP Three month 7. System for perform 8. System for performance evaluation 7.monthly monthly performance evaluation with feedback 3 evaluation formance evalue 8.a Implement tracking prevent subtantial divisions, the evaluation and promote timely program corrections. (Bit-monthly evaluation and feedback can be acceptable for small facilities, and evaluation every three months is the minimum acceptable. Monthly 3 (Binnonthl the evaluation and feedback can be acceptable for small for subtantial divisions, the minimum acceptable.			guided by protocol		
7. Medication refili 7. Implement standard 3-month refil intervals for all BP medication precriptions for patients stable and controlled 3 a month monthly monthe monthly monthly monthe monthly monthly monthly monthe monthly m				≥ 70%	1
System for performance 1.5 system for performance 1.6 system for performance			guided by protocol.		
medication prescriptions for patients stable and controlled contro				_	-
controlled c		frequency			3 (2 month refill = 2; monthly refill = 1)
System for perfor B. System for per- formance walue. 3 Bit monthly action 3 Bit monthly back to facilitate tracking, prevent substantial deviations and promote timely program corrections. (Bitmonthly evaluation and feedback can be acceptable for small facilities, and evaluation every three months is the mini- mum acceptable. 3 Bit monthly feedback rable 2a: Hypertension control drivers, recommendations for implementation and scoring for Maturity index. 3				. enn	montiny term = 1)
mance formance wordue Bal Implement monthly performance evaluation with feed Monthly 3 (Binnonthl evaluation and score evaluation with feed evaluation ation back to focilitate tracking, prevent substantial deviations with feedback Monthly 3 (Binnonthl three monthly performance evaluation with feedback Feedback Performance evaluation and feedback Feedback Performance evaluation and feedback Performance evaluation and feedback and evaluation every three monthly is the minimum acceptable. Feedback Performance evaluation and scoring for Maturity index. Feedback	System for perfor-	8. System for per-	controlled		3
with feedback and promote timely program corrections. (Il-monthy evaluation and feedback can be acceptable for small fedilles, and evaluation every three months is the mini- mum acceptable.			8.a Implement monthly performance evaluation with feed-	Monthly	3 (Bi-monthly = 2; ever
evaluation and feedback can be acceptable for small facilities, and evaluation every three months is the mini- mum acceptable). <i>Table 2a</i> : Hypertension control drivers, recommendations for implementation and scoring for Maturity index.	evaluation	ation	back to facilitate tracking, prevent substantial deviations	feedback	three months = 1)
facilities, and evaluation every three months is the mini- mum acceptable). Table 2a: Hypertension control drivers, recommendations for implementation and scoring for Maturity index.		with feedback			
mum acceptable). Table 2a: Hypertension control drivers, recommendations for implementation and scoring for Maturity index.					
Table 2a: Hypertension control drivers, recommendations for implementation and scoring for Maturity index.					
			mum acceptable).		
Level 2 Level 3 Level 4	<i>able 2a</i> : Hypertens	sion control drivers, re	ecommendations for implementation and scoring for M	turity index.	
Level 2 Level 3 Level 4					
		Level 2	Level 3 Lev	el 4	Level 5
7-10 11-14 15-18		7-10	11-14 15-	-18	19–21

Table 2b: HEARTS maturity index*.

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

Indicators	Level of performance, goal, and scores				
	Poor (<50%)	Incipient (\geq 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.

Hypertension Clinical Pathway





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

Level

<7



Implementation

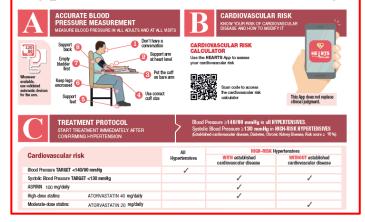
- Initiate implementation of the first key clinical and managerial interventions to improve the management of hypertension
- Execute all the steps of the plan according to the established time frame
- Primary health facilities use the platform to enter data and/or generate a synchronization process to 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

curso virtual sobre medicion automatica y precisa de la presión arterial. <u>https://www.campusvirtualsp.org/en/course/virtual-course-</u> 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.campusvirtualsp.org/en/node/30810

Hypertension Clinical Pathway



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.





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			3
b raginosis	accuracy	1.a Establish BP measurement training every six months for	≥ 90%	1
		all staff involved with BP measurement.		
		2.a Institute standardized BP measurement protocols,	≥ 90%	1
		including patient preparation and repeated BP mea-		
		surement if the first BP reading is elevated.		
		3.a Implement the exclusive use of validated automatic BPMD for clinical practice.	≥ 90%	1
	2. CVD risk			2
	assessment	2.a Assess the CVD risk in all patients with hypertension to guide BP goal and frequency of follow-up.	≥ 80%	1
		 Use of combination BP medication, statin, aspirin (as needed) in high CVD risk patients, including those with 	≥ 80%	1
		diabetes and CKD.		
Treatment	Standardized			2
	Treatment Protocol	3.a Standardized treatment protocol with specific medica- tions and doses	Implemented	1
		3.b Established protocol using FDC medication	Implemented	1
	4. Treatment			2
	intensification	4.a Initiate pharmacological treatment immediately after the diagnosis of HTN is confirmed.	≥ 70%	1
		4.b Medication must be added or intensified as per stan-	≥ 80%	1
		dard protocol if BP \geq 140/90 or SBP \geq 130 mmHg for high-risk patients		
Continuity of care	5. Continuity of			3
and follow-up	care and follow- up	5.a Follow-up of elevated BP within 2-4 weeks if not controlled	≥ 80%	1
		5.b BP visit within six months for all patients with hyperten- sion stable and well- controlled.	≥ 80%	1
		5.c BP visit within 3 months for all patients with hyperten- sion and high CVD risk, including diabetes and CKD	≥ 80%	1
Delivery System	6. Team-based care			3
	and task-shifting	6.a BP measurement by NPHW appropriately trained and certified	≥ 90%	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			3
	frequency	7.a Implement standard 3-month refill intervals for all BP	Three months	3 (2 month refill = 2;
		medication prescriptions for patients stable and controlled	refill	monthly refill = 1)
System for perfor-	8. System for per-			3
mance	formance evalu-	8.a Implement monthly performance evaluation with feed-	Monthly	3 (Bi-monthly = 2; ever
evaluation	ation	back to facilitate tracking, prevent substantial deviations	feedback	three months = 1)
	with feedback	and promote timely program corrections. (Bi-monthly evaluation and feedback can be acceptable for small facilities, and evaluation every three months is the mini-		
		mum acceptable).		
<i>able 2a</i> : Hypertensi	ion control drivers, re	commendations for implementation and scoring for Ma	aturity index.	
11	Level 2	Level 3	Level 4	Level !

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.



Systematization (Act and plan for next)

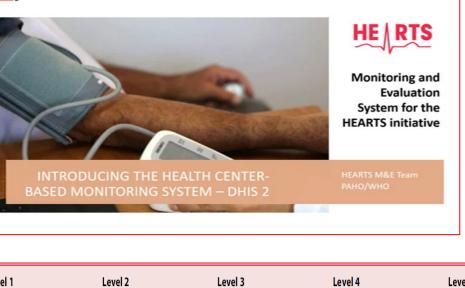
- Next phase of a continuous quality improvement cycle
- Definition of a work plan for the next 6 months
- Scaling up the implementation of the M&E system, using champions from countries as facilitators to create a learning community among countries
- HEARTS champions on the ground
- Coaching, communication,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

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-automatedblood-pressure-measurement-2020



A PRESSU	TE BLOOD RE MEASUREMENT 000 PYESSERE IN ALL ACUES 0	Don't have a conversation CAP CAL Support arm User	CARDIOVASCULA REASE AND HOW TO ME NOT A COMPANY AND AND AND AND REASE AND HOW TO ME REASE AND HOW TO ME REASE AND AND AND AND REASE AND AND AND AND REASE AND AND AND AND REASE AND AND AND AND REASE AND	
START TRE	NENT PROTOCOL ATMENT IMMEDIATELY AFTE ING HYPERTENSION	ra Bio Syst All Rypertensives	od Pressure ≥140/90 mmHg in al tolic Blood Pressure ≥130 mmHg bishet cartineacular dense, Dabete, D HICH-RIS WTH established cardiovascular deseas	
Blood Pressure TARGET <14	0/90 mmHg	/		
Systolic Blood Pressure TAR	GET <130 mmHg		1	1
ASPIRIN 100 mg/daily			1	
High-dose statins: Moderate-dose statins:	ATORVASTATIN 40 mg/dail ATORVASTATIN 20 mg/dail		1	1
Body mass index between 18.5 and 24.9	2 1 Tablet of Te Patient above 1 Tablet of Te + ½ Tablet of Patient above 1 Tablet of Te	e target after repeat elmisartan/Amlodip e target after repeat elmisartan/Amlodip f Chlorthalidone 25 e target after repeat elmisartan/Amlodip	measurement ine 80/10 mg measurement ine 80/10 mg mg t measurement ine 80/10 mg	MONTH Do 30 minu physical ac daly MONTH MONTH Keep a healthy of
//	+ 1 Tablet of	Chlorthalidone 25		
Avoid foods high in sodium Patients under control	R Minimum 6-MONTH follow-up	Patient above tai lefer to the next leve Minimum 3-MONTH S	rget:	Vaccination
Avoid foods high in sodium	Minimum 6-MONTH	efer to the next leve	rget: el of care	No smok

Unpertoncion Clinical Dathway



L	Level 1	Level 2	Level 3	Level 4	Level 5
	<7	7–10	11–14	15-18	19–21
l	Table 2b: HEARTS m	aturity index*.			
L	A 11 1 1 1	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	1.1.173 1.1.1.1.1.1.1.1.1	1	

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

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

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.



