



38^{ème} CONGRÈS NATIONAL
DE CARDIOLOGIE
ET DE CHIRURGIE
CARDIO-VASCULAIRE
Joint au
2^{ème} CONGRÈS
DES SOCIÉTÉS AFRICAINES
DE CARDIOLOGIE



Congrès National de Cardiologie et de Chirurgie Cardiovasculaire

Tabarka du 25 au 27 Octobre 2018.

« HTA non contrôlée : Session Africaine »

Que disent les recommandations de la PASCAR ?

Prof Anastase DZUDIE. MD, PhD, FESC

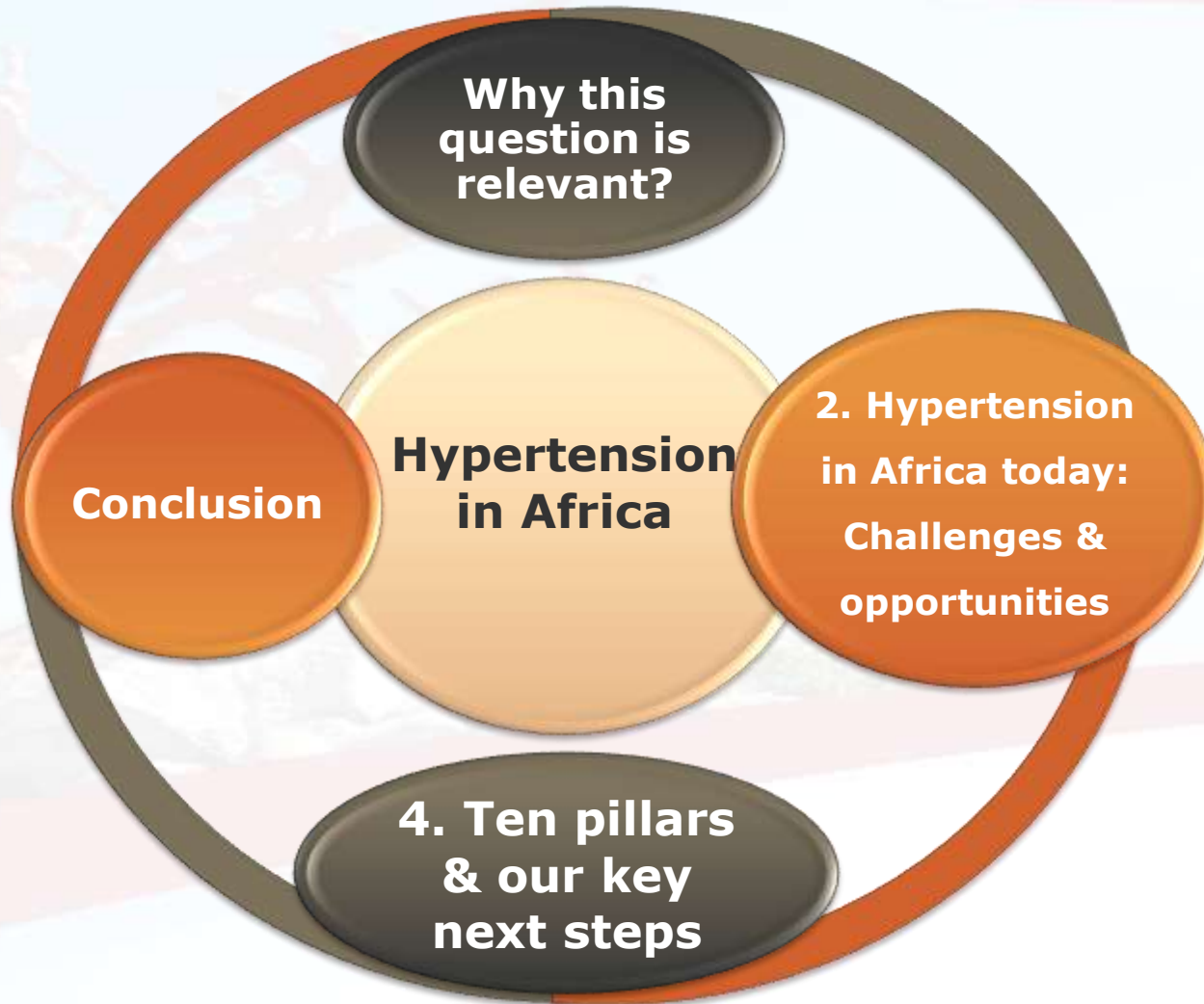
Unité de Cardiologie et stimulation cardiaque, Hôpital Général de Douala, Cameroun

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Douala, Cameroun

WHAT WE WILL COVER



1. Classification of BP & definition of hypertension

COR	LOE	Recommendation for Definition of High BP
I	B-NR	BP should be categorized as normal, elevated, or stage 1 or 2 hypertension to prevent and treat high BP.

BP Category	SBP		DBP
Normal	<120 mm Hg	and	<80 mm Hg
Elevated	120–129 mm Hg	and	<80 mm Hg
Hypertension			
Stage 1	130–139 mm Hg	or	80–89 mm Hg
Stage 2	≥140 mm Hg	or	≥90 mm Hg

*Individuals with SBP and DBP in 2 categories should be designated to the higher BP category.
BP indicates blood pressure (based on an average of ≥2 careful readings obtained on ≥2 occasions, as detailed in DBP, diastolic blood pressure; and SBP systolic blood pressure.

ACC/AHA: BP Goal for Patients With Hypertension

~~140/90~~

known CVD or
a BP target of

COR	LOE	HF in Adults With Hypertension
I	SBP: B-R	In adults at increased risk of Heart Failure , the optimal BP in those with hypertension should be less than 130/80 mm Hg .
	DBP: C-	
130/80		
C		
I	B-R	treatment should be initiated at a BP of 130/80 mm Hg or higher with a treatment goal of less than 130/80 mm Hg .

PASCAR ROADMAP ON HYPERTENSION:

Roadmap to achieve 25% hypertension in Africa by 2025

Anastase Dzudie, Brian Rayner, Dike Ojji, **Aletta E Schutte**, Marc Twagirimukiza, **Albertino Damasceno**, Seringe Abdou Ba, Abdoul Kane, Euloge Kramoh, Jean Baptiste Anzouan Kacou, Basden Onwubere, Ruth Cornick, Karen Sliwa, Benedict Anisiuba, Ana Olga Mocumbi, Elijah Ogola, Mohamed Awad, **George Nel**, Harun Otieno, Ali Ibrahim Toure, Samuel Kingue, Andre Pascal Kengne, Pablo Perel, Alma Adler, **Neil Poulter**, **Bongani Mayosi**, on behalf of the PASCAR task force on hypertension.

CARDIOVASCULAR JOURNAL OF AFRICA, Volume 28, No 4, July/August 2017

Glob Heart. 2017 Oct 14. pii: S2211-8160(17)30054-6.

Hypertension: WHO Estimates

- The global prevalence is $\approx 22\%$.



AFR=African Region, AMR=Region of the Americas, SEAR =South-East Asia Region, EUR=European Region, EMR=Eastern Mediterranean Region, WPR=Western Pacific Region

Global Status Report, 2014. Apps.WHO.int.

**Between 1990 and 2010,
hypertension caused over
500,000 deaths in Africa!**



PASCAR WORKING GROUP ON HYPERTENSION

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Conference Proceedings

Development of the roadmap and guidelines for the prevention and management of high blood pressure in Africa:

Proceedings of the PASCAR Hypertension Task Force meeting: Nairobi, Kenya, 27 October 2014

Meeting Report

Development of the roadmap for reducing cardiovascular morbidity and mortality through the detection, treatment and control of hypertension in Africa: report of a working group of the PASCAR Hypertension Task Force

Anastase Dzudie, Christ Nadege Nganou, Liliane Mfeukeu Kuete, Euloge Kramoh, Jean Louis Nkoua, Abdoul Kane, Alain Menanga, Samuel Kingue, Serigne Abdou Ba, on behalf of the working group

Month	Main Activities	Description
Feb 14	Build Task force	Appointment of chair
		Recruitment of task force Members
May 14	Consolidate the taskforce	Planning the meeting
Oct 14	Nairobi	1st taskforce meeting. Hypertension as a priority action area Review of previous relevant hypertension programs and guidelines and plan the Africa roadmap
Nov 14		Publication of the 1 st meeting proceedings with conclusions from the task force
Apr 15	Warehouse - WHF	Internal survey – Identification of a Ware house developer – Work with WHF on roadmap
Aug 15	London	Feedback from members and how to customize the WHF roadmap for Africa
Sep 15	Draft of roadmap	Draft of roadmap by PASCAR & WHF experts
Oct 15	Mauritius	Discuss the 1 st draft of Africa roadmap with National cardiac and hypertension societies
March 16	Yaounde	Discuss the 1 st draft of Africa roadmap with French National cardiac and hypertension societies
April 16		Task force review and agree on a second version of draft roadmap by emails
May 16	Validation	Submission of roadmap for external peer review (hypertension expert & public health specialists)
June 16		Task force collect and summarize external peer review comments
Jun 16	Mexico	Task force review external peer review comments - updates needed on algorithm
May 17		Task force review and agree on the final version of evidence report and recommendations by emails
Sep 17		Publication by in Cardiovascular Journal of Africa and Global Heart

OUTCOME OF THE NAIROBI MEETING

October 2014

CONFERENCE PROCEEDINGS

1. Need for a clear continental policy program!

2. Need for research: outcome data & RCTs!



THE CRISIS & OUR TARGET TO ACHIEVE IN 2025

150 millions people

Prevalence
30 %
(27-34%)

Awareness
27 % (7-56%)

Not aware
73 %

Treated
18 % (14-22%)

Untreated
82 %

Controlled*
25 %

Uncontrolled
75 %

* BP < 140/90 mmHg

Roadblocks

Solutions

Medicine

Improve availability & affordability of high quality medications

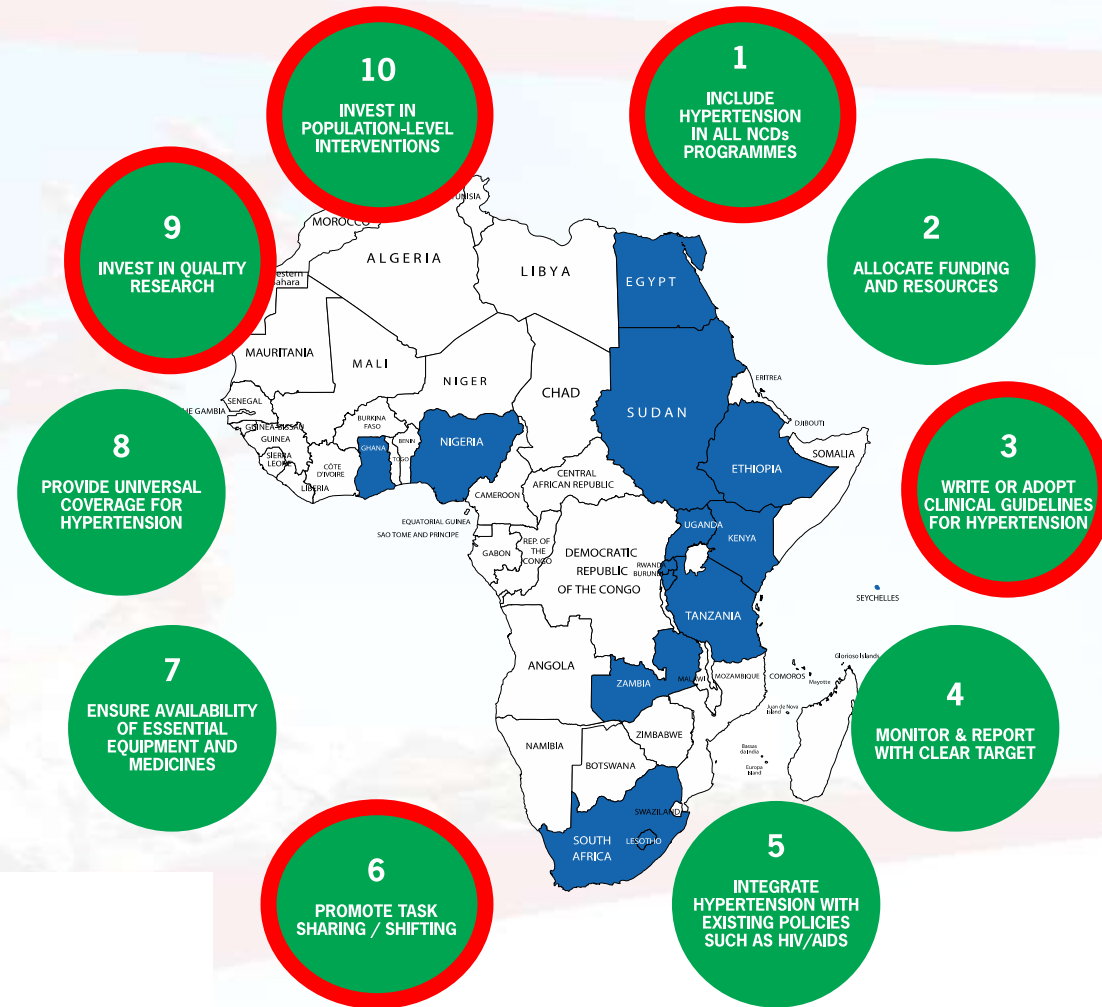
Shortage of healthcare professionals & legislation

1. Use task sharing / shifting
2. Influence prescription legislation (eg Mozambique)

Unavailable or complex guidelines

Write or adopt simple and practical guidelines

10 **PRIORITY ACTIONS** TO REDUCE THE BURDEN OF HYPERTENSION IN AFRICA BY 2025



2015 map of African countries (coloured blue) with traceable guidelines for the management of hypertension

May Measurement Month 2017: an analysis of blood pressure screening results worldwide

Thomas Beane, Aletta E Schutte, Maciej Tomaszewski, Cono Ariti, Louise M Burrell, Rafael R Castillo, Fadi J Charchar, Albertino Damasceno, Ruan Kruger, Daniel T Lackland, Peter M Nilsson, Dorairaj Prabhakaran, Agustin J Ramirez, Markus P Schlaich, Jiguang Wang, Michael A Weber, Neil R Poulter, on behalf of the MMM Investigators

Summary

Background Increased blood pressure is the biggest contributor to the global burden of disease and mortality. Data suggest that less than half of the population with hypertension is aware of it. May Measurement Month was initiated to raise awareness of the importance of blood pressure and as a pragmatic interim solution to the shortfall in screening programmes.

Methods This cross-sectional survey included volunteer adults (≥ 18 years) who ideally had not had their blood pressures measured in the past year. Each participant had their blood pressure measured three times and received a questionnaire about demographic, lifestyle, and environmental factors. The primary objective was to raise awareness of blood pressure, measured by number of countries involved, number of people screened, and number of people who have untreated or inadequately treated hypertension (defined as systolic blood pressure ≥ 140 mm Hg or diastolic blood pressure ≥ 90 mm Hg, or both, or on the basis of receiving antihypertensive medication). Multiple imputation was used to estimate the mean of the second and third blood pressure readings if these were not recorded. Measures of association were analysed using linear mixed models.

Findings Data were collected from 1 201 570 individuals in 80 countries. After imputation, of the 1 128 635 individuals for whom a mean of the second and third readings was available, 393 924 (34.9%) individuals had hypertension. 153 905 (17.3%) of 888 616 individuals who were not receiving antihypertensive treatment were hypertensive, and 105 456 (46.3%) of the 227 721 individuals receiving treatment did not have controlled blood pressure. Significant differences in adjusted blood pressures and hypertension prevalence were apparent between regions. Adjusted blood pressure was higher in association with antihypertensive medication, diabetes, cerebrovascular disease, smoking, and alcohol consumption. Blood pressure was higher when measured on the right arm than on the left arm, and blood pressure was highest on Saturdays.

Interpretation Inexpensive global screening of blood pressure is achievable using volunteers and convenience sampling. Pending the set-up of systematic surveillance systems worldwide, MMM will be repeated annually to raise awareness of blood pressure.

Funding International Society of Hypertension, Centers for Disease Control and Prevention, Servier Pharmaceutical Co.

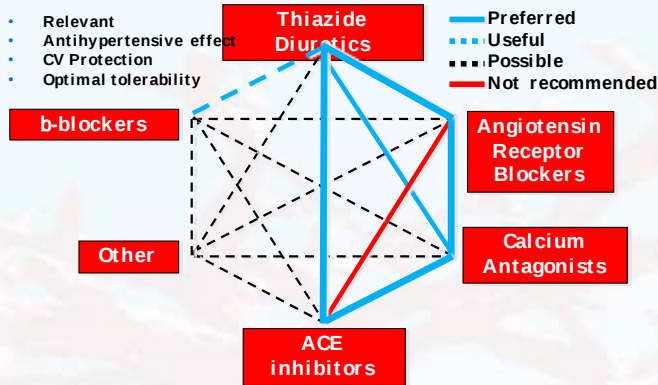


Map of African countries with evidence of existence of Clinical practice guidelines for hypertension management

Dzudie et al. European Heart Journal

CREOLE: What is the best dual combination to initiate the treatment of hypertension in Africa?

ESH/ ESC 2013 Guidelines Recommendations



2013 ESH/ESC Guidelines. J Hypertens 2013; 31: 1281–1297
2013 ESH/ESC Guidelines. Eur Heart J 2013; 34: 2159–2219

25% of African Countries have traceable guidelines for hypertension.

What is the best dual combination to initiate the treatment of hypertension in Africa?

- ✓ ACEI + Diu?
- ✓ Diu + CCB?
- ✓ ACEI + CCBs?



Eligible patients
Randomized (Blinded)
Visit 1

Arm 1 (n=234)
Amlodipine/
Hydrochlorothiazide

Arm 2 (n=234)
Amlodipine/
Perindopril

Arm 3 (n=234)
Perindopril/
Hydrochlorothiazide

Visit 2 2 months	Visit 3 4 months	Visit 4 (Final) 6 months
---------------------	---------------------	-----------------------------

Primary outcome: A reduction in SBP (ABPM)



Availability medicines across PHC facilities in the South west Region,
Cameroon.

Dzudie et al, 2015, submitted

	Public; % (n)	Confessional	Private	Private community	Urban; %,n	Suburban	Rural; % (n)
Same photo for diagnostic equipment, guidelines and trained health staff							
Amlodipine	16.7 (4)	36.4 (4)	5.6 (1)	90.0 (9)	47.1 (8)	32.0 (8)	9.5 (2)
ACEI	0.0 (0)	81.8 (9)	5.6 (1)	50.0 (5)	29 .4 (5)	28.0(7)	14.3 (3)
HCT	79.2 (19)	90.9 (10)	72.2 (13)	100.0 (0)	88.2 (15)	84.0 (21)	76.2 (16)
ARVs	100 (8)	100 (4)	NA	NA	100 (3)	100 (6)	100 (4)

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https://www.ncbi.nlm.nih.gov/pubmed/28641892

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Int J Cardiol. 2017 Sep 15;243:523-528. doi: 10.1016/j.ijcard.2017.04.099. Epub 2017 Jun 20.

Fighting fake medicines: First quality evaluation of cardiac drugs in Africa.

Antignac M¹, Diop BI², Macquart de Terline D³, Bernard M⁴, Do B⁴, Ikama SM⁵, N'Guetta R⁶, Balde DM⁷, Tchabi Y⁸, Sidi Aly A⁹, Ali Toure I¹⁰, Zabsonre P¹¹, Damorou JMF¹², Takombe JL¹³, Fernandez C¹⁴, Tafflet JL¹⁵, Empana JP¹⁵, Plouin PF¹⁶, Narayanan K¹⁷, Marion E¹⁶, Jouven X¹⁸.

⊕ Author information

Abstract

BACKGROUND: The growing menace of poor quality and falsified drugs constitutes a major hazard, compromising healthcare and patient outcomes. Efforts to assess drug standards worldwide have almost exclusively focused on anti-microbial drugs; with no study to date on cardiovascular drugs. Our study aims to assess quality of seven routinely used cardiovascular medications (anticoagulants, antihypertensives and statins) in ten Sub-Saharan African countries.

METHODS: Drugs were purchased using standardized methods between 2012 and 2014 from licensed (from pharmacies) and unlicensed (street-markets) places of sale in Africa. We developed a validated reversed-phase liquid chromatography with tandem mass spectrometry method to accurately measure the concentration of the active ingredient. Public laboratory quality categories were defined based on the ratio of the measured to the expected dosage of the active ingredient. A (good quality): ≥ 95%, B (low quality): 85% to 94.9%, C (very low quality): <85%.

RESULTS: All expected medicines (n=3468 samples) were collected in Benin, Burkina-Faso, Congo-Brazzaville, the Democratic Republic of Congo, Guinea, Côte d'Ivoire, Mauritania, Niger, Togo and Senegal. Out of the 1530 samples randomly tested, poor quality (types B and C) was identified in 249 (16.3%) samples. The prevalence of poor quality was significantly increased in certain specific drugs (amlodipine 29% and captopril 26%), in generic versions (23%), in products produced in Asia (36%), in proportion of poor quality was higher when drugs produced in Asia were sold in street-markets.

CONCLUSION: In this first study assessing the quality of cardiovascular drugs, we have found a significant proportion of poor quality drugs. This requires continued monitoring strategies.

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KEYWORDS: Cardiology; Counterfeit drugs; Developing countries; Drug quality; Drugs; Falsified drugs; Hypertension

Comment in
Counterfeit drugs: A plot worthy of John le Carré. [Int J Cardiol. 2017]

PMID: 28641892 DOI: 10.1016/j.ijcard.2017.04.099

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Review: Reducing sub-Saharan African countries' drug problem [Subst Use Misuse. 2002]
Optimizing the management of acute coronary syndromes in sub-Se [Arch Cardiovasc Dis. 2016]

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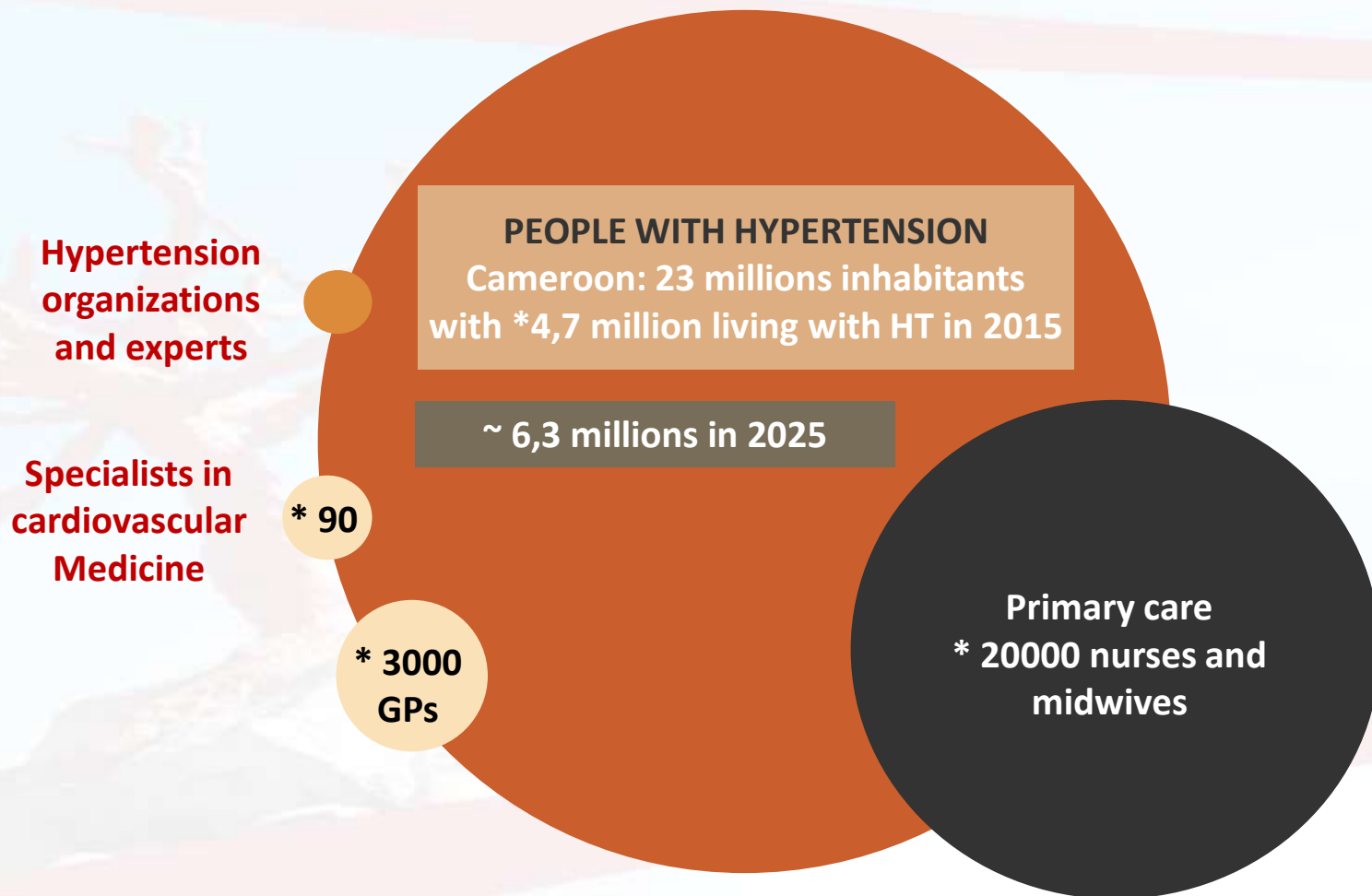


Shift of paradigm

Promote **task sharing / shifting** in the detection of hypertension by **adequately trained community health workers (3)** and in the management by **nurses and GPs**

Gaziano TA, Abrahams-Gessel S, Denman CA, Montano CM, Khanam M, Puoane T, et al. An assessment of community health workers' ability to screen for cardiovascular disease risk with a simple, non-invasive risk assessment instrument in Bangladesh, Guatemala, Mexico, and South Africa: an observational study. The Lancet Global health. [Observational Study]

CAPACITY OF HEALTH CARE EXPERTS TO MANAGE HYPERTENSION IN CAMEROON



Task shifting / Task sharing

African Certificate Course in Management of Hypertension

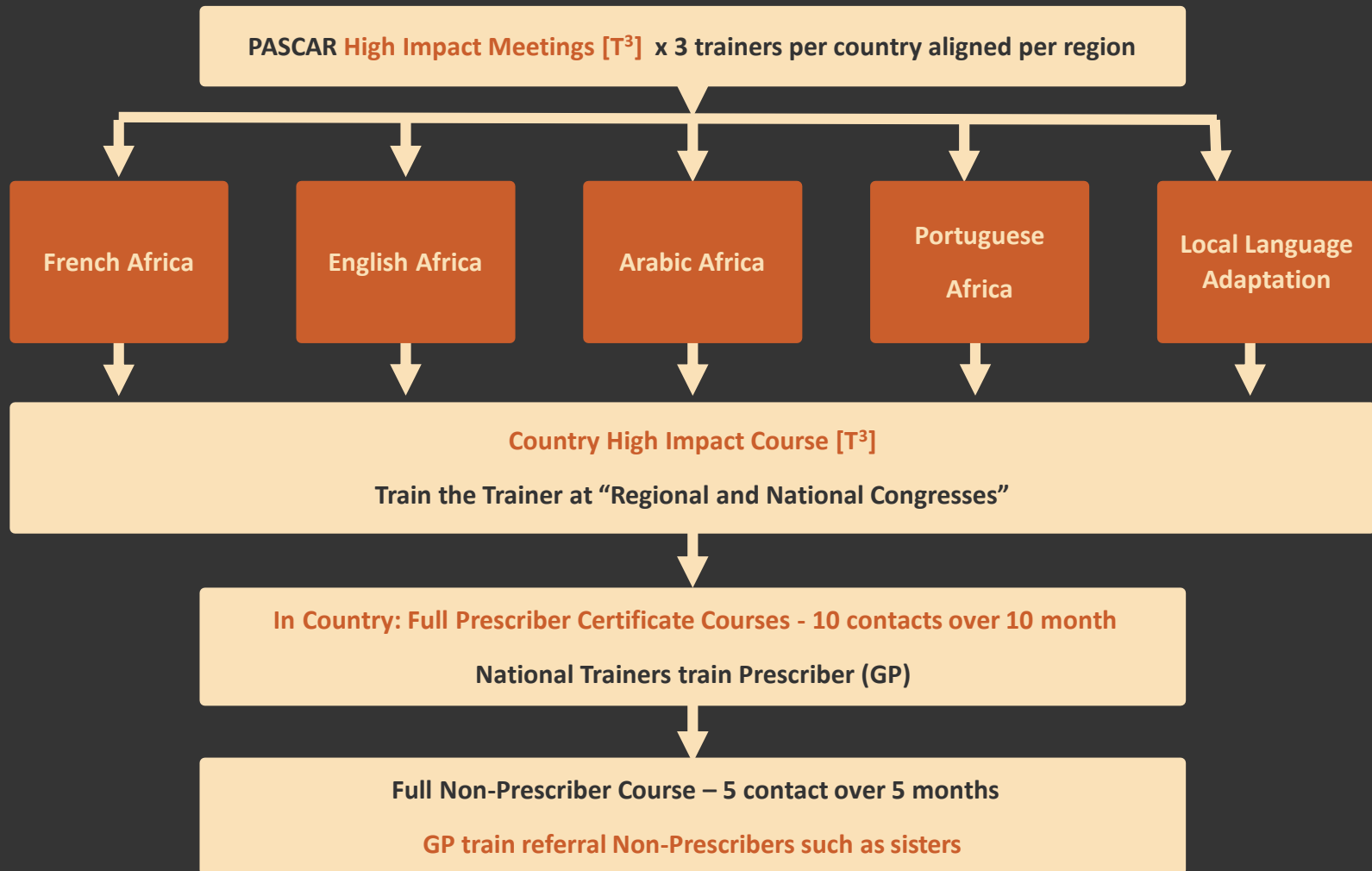
TRAINING!!!!!!

25 000 certified general physicians and 50 000 nurses!!!

IN 10 Years.

Gaziano TA, Abrahams-Gessel S, Denman CA, Montano CM, Khanam M, Puoane T, et al. An assessment of community health workers' ability to screen for cardiovascular disease risk with a simple, non-invasive risk assessment instrument in Bangladesh, Guatemala, Mexico, and South Africa: an observational study. The Lancet Global health. [Observational Study]

African Certificate Course in Management of Hypertension (CCMH-Africa)



Continental Meeting: **High Impact Train The Trainer [T³]**

PASCAR Report

Development of the certificate course in the management of hypertension in Africa: proceedings of the first continental faculty meeting, Nairobi, Kenya, 25–26 February 2018

Anastase Dzudie, Dike Ojji, Albertino Damasceno, Mahmoud U Sani, Euloge Kramoh, Jean Baptiste Anzouan Kacou, Benedict Anisiuba, Elijah Ogola, Mohamed Awad, George Nel, Harun Otieno, Ali Ibrahim Toure, Abdoul kane, Andre Pascal Kengne, Calypse Ngwasiri, Hamadou Ba, Samuel Kingue, Bruno Mipinda, Bertrand Ellenga Mbolla, Amha Weldehana, Fred Bukachi, Bernard Gitura, Brice Kitio, Brian Rayner, Aletta E Shutte, Ana Olga Mocumbi, Bongani Mayosi, Arun Jose, Bhalla Sandeep, Michael Weber, Christian Delles, Francesco Cappuccio, Habib Gamra, Dorairaj Prabhakaran, Neil Poulter, Saad Subhani, on behalf of the PASCAR task force on hypertension

Nairobi, 25 february 2018



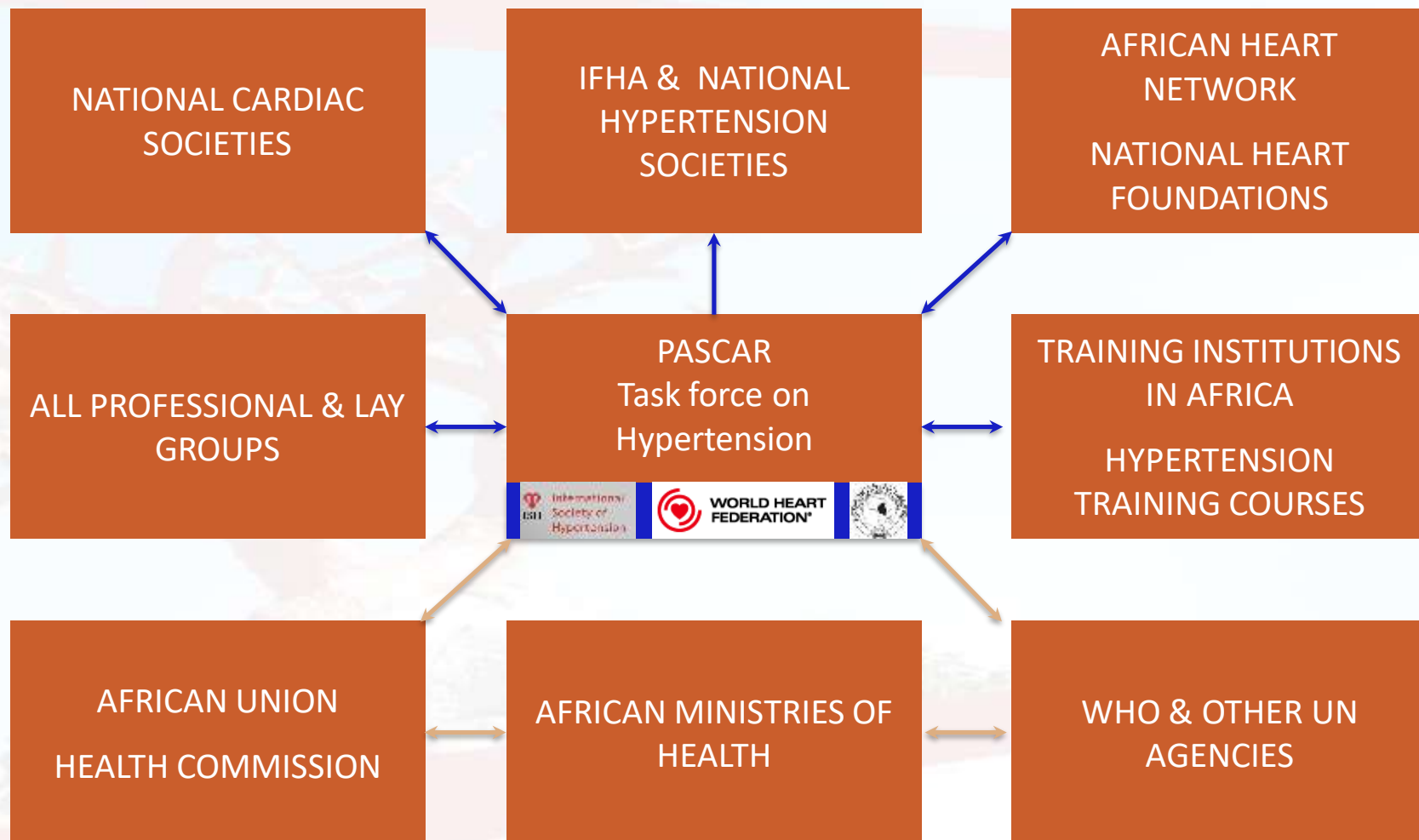
Population level interventions





1. Policy dialogues
2. Implementation

KEY NEXT STEPS: PURSUIT IN POLICY DIALOGUES



Challenges



Advocacy

Conclusion

Background and Aim

- **Hypertension our first enemy → continental coalition**
- Aim a 25% control rate of hypertension by 2025

Priority actions

- **Ten pillars are necessary to achieve this goal.**
- All stakeholders (we, the government, the private sector, academia, and community organizations should work together)

Future steps

- Policy dialogue (WHO, AU) to ensure implementation
- Key role of Regional and National champions via Cardiac societies

" Africa should walk before it can SPRINT"

Acknowledgements

All & Everyone !!!!!!!

PASCAR task force on hypertension,
WHF, ISH, .. and all other partners

Shaping the future of Hypertension in Africa

TEAM: Together Everyone Achieve More